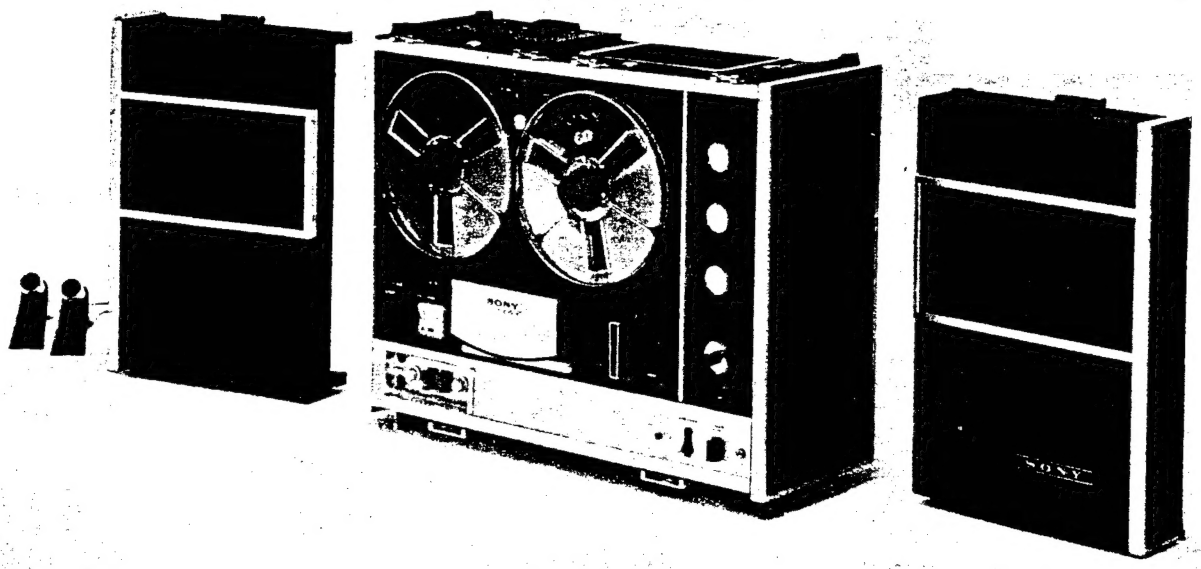
Serial No.122,351 and after
Except Serial No. 124,851~125,850

TC-530



Specifications

Power Requirements: AC 100, 110, 117, 125, 220 or 240V, 65 watts, with voltage selector, 50/60 cps
Only AC 60 c/s 117 V for U.S.A
Only AC 50/60 cps 117V for Canada

Tape Speed: 7½ ips., 3¾ ips. and 1⅞ ips. (19, 9.5 and 4.75 cm/s), instantaneous switching with automatic equalization change

Reels: 7″ (18 cm) or smaller

Recording System: 4-track stereophonic or monophonic

Frequency Response: 30~20,000 cps at 7½ ips. (19 cm/s)
±3 db 50~15,000 cps at 7½ ips. (19 cm/s)
30~13,000 cps at 3¾ ips. (9.5 cm/s)
30~10,000 cps at 1⅞ ips. (4.75 cm/s)

Flutter and Wow: Less than 0.17% at 7½ ips. (19 cm/s)
Less than 0.3% at 3¾ ips. (9.5 cm/s)
Less than 0.4% at 1⅞ ips. (4.75 cm/s)

Power Output: 20 watts total (music power)
10 watts total (undistorted)

Signal-to-noise Ratio: Better than 48 db (at peak record level)

Harmonic Distortion: Less than 3% at 0 db line output

Level Indication: VU meters calibrated to NAB standard

Tone Controls: Two separate controls for bass and treble

Inputs: Low impedance microphone inputs: transistorized (with accommodate any microphone from 250 to 1K ohm impedance) -72 dbs (0.19 mV)
High impedance (100 K ohms) auxiliary inputs: -22 dbs (0.06 V)

Outputs: Line outputs: 0 db (0.775 V), load impedance 100K ohms
Speaker outputs: load impedance 8 ohms
Binaural monitor output: will accommodate stereo headset Model DR-3C (10 K ohm impedance)

Integrated Record/Playback Connector: Input : -62 db (0.6 mV)
Impedance 10K ohms
Output: 0 db (0.775 V)
Impedance 10K ohms

Recording Time: (with 1,800′ tape)

4-track stereo	4-track monophonic
1 hr. 30 min.	3 hrs. at 7½ ips.
3 hrs.	6 hrs. at 3¾ ips.
6 hrs.	12 hrs. at 1⅞ ips.

Transistors: 2SC401 (8), 2SC402 (8), 2SC318 (2), 2SD28 (4), 2SB383 (2)

Diodes: 5GD (4), 1T22 (4)

Record/Playback Head: PP30-4202N1

Erase Head: EF18-2902H

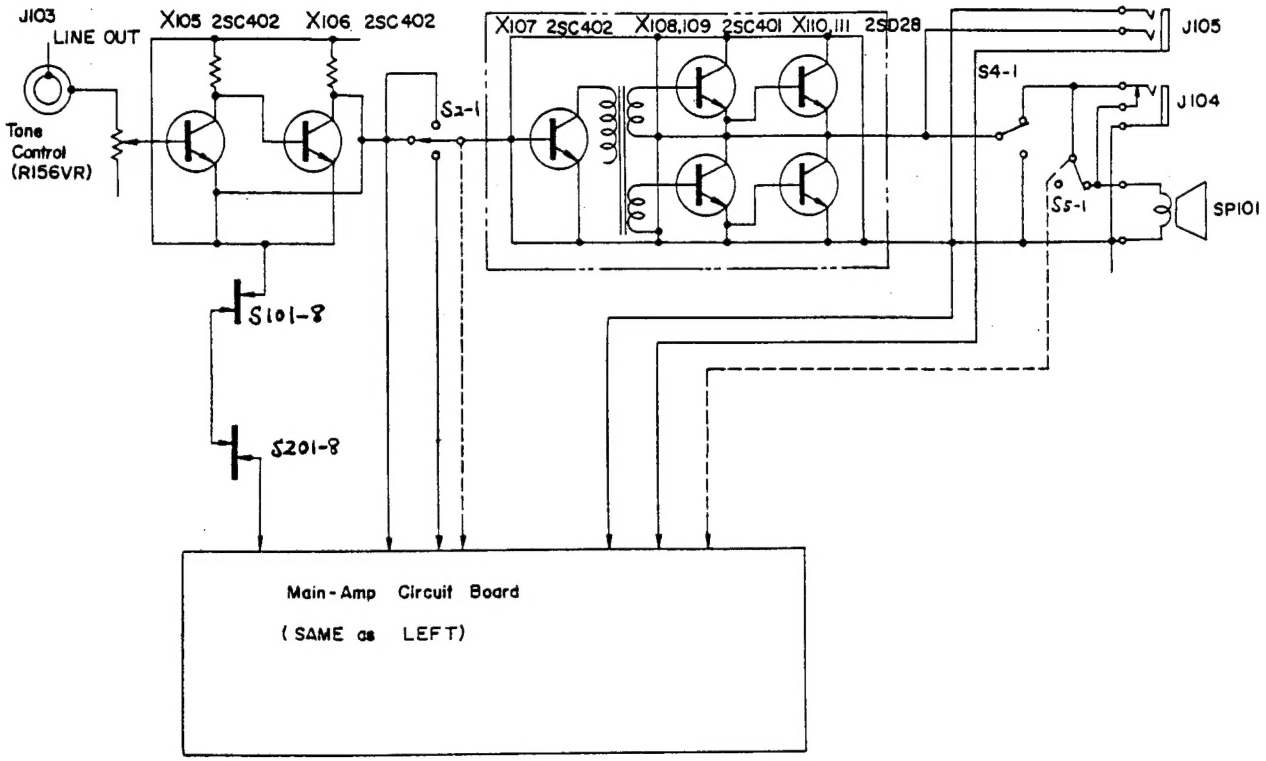
Dimensions: 19¹¹⁄₁₆″ (W) × 19¹⁵⁄₁₆″ (H) × 15⁷⁄₁₆″ (D)
(500 × 252 × 391 mm)

Weight: 41 lbs. 10 ozs. (19 kgs.)

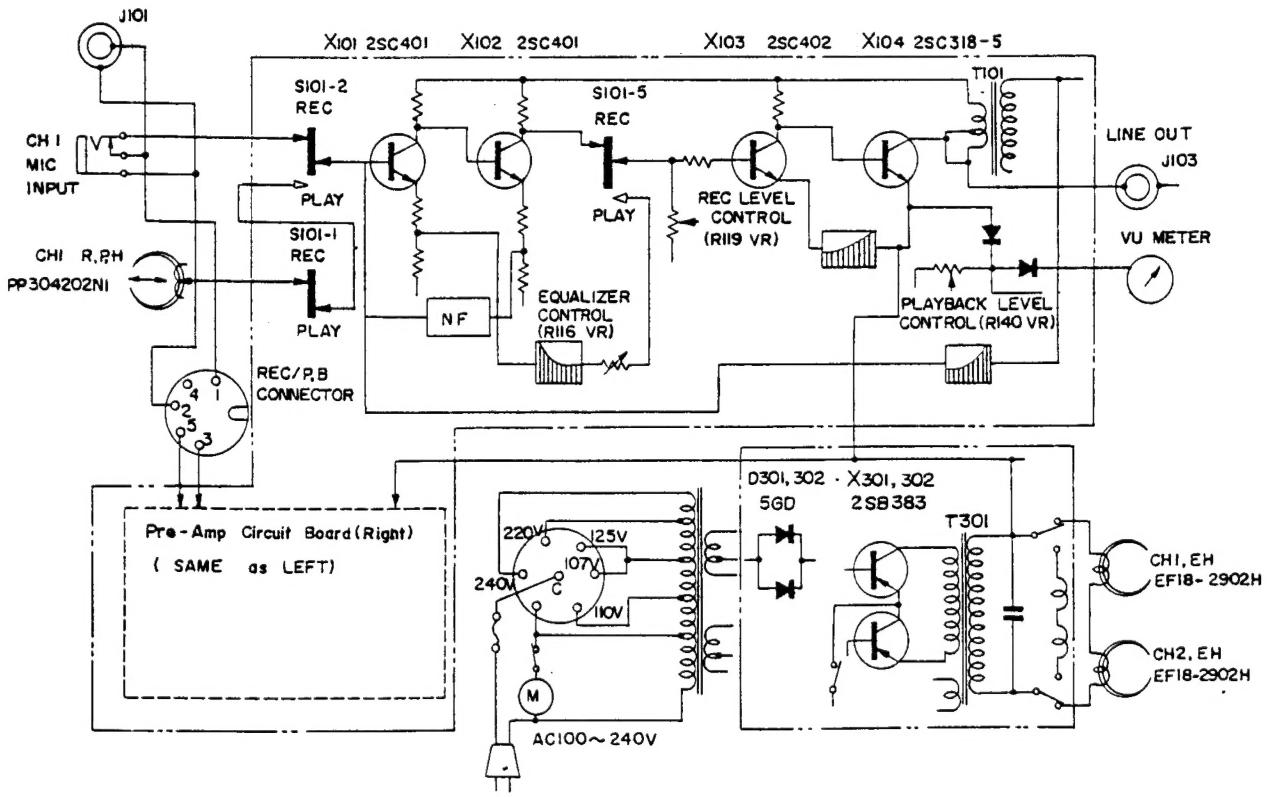
SONY®
SERVICING GUIDE

Block Diagram

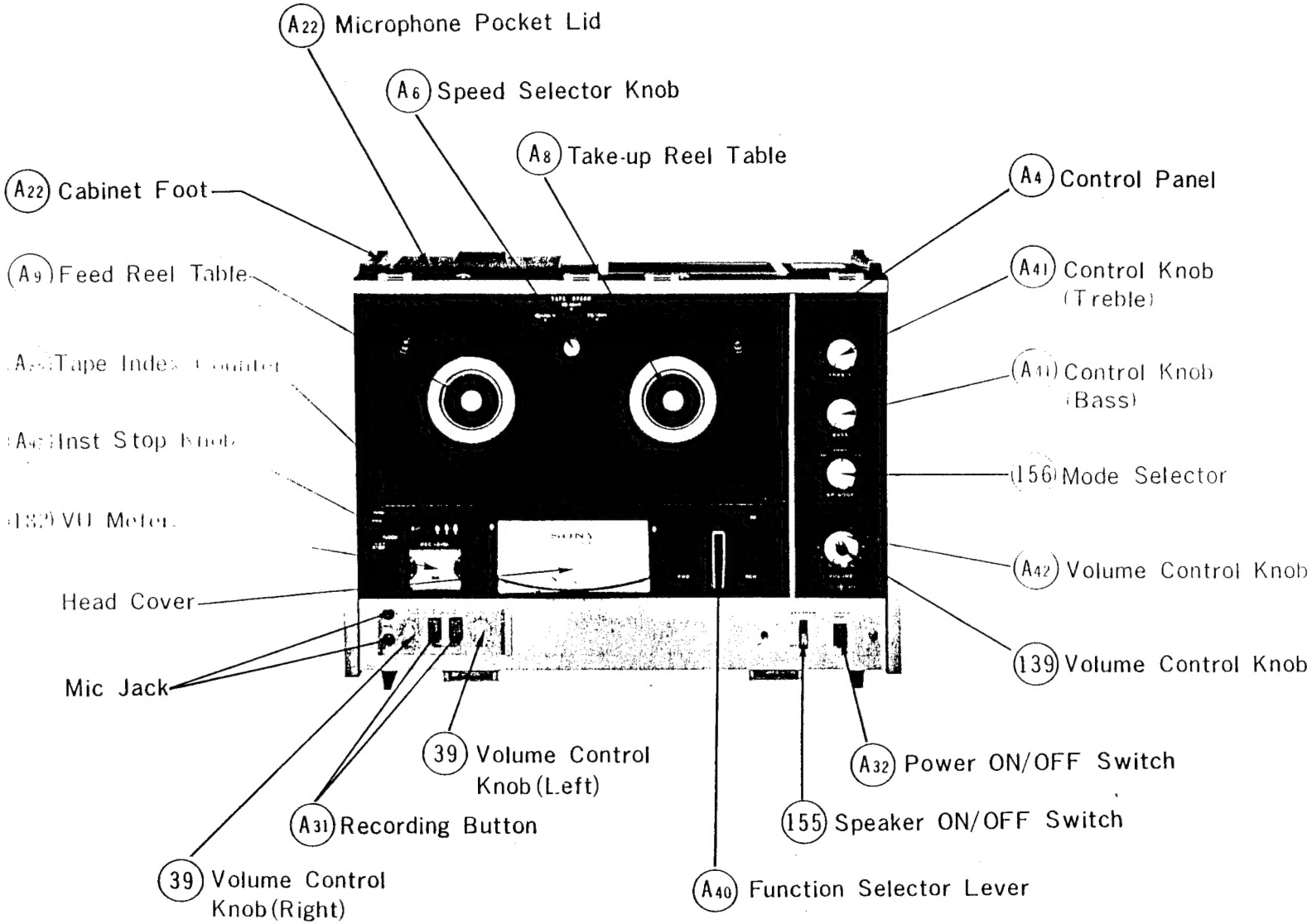
Main Amplifier



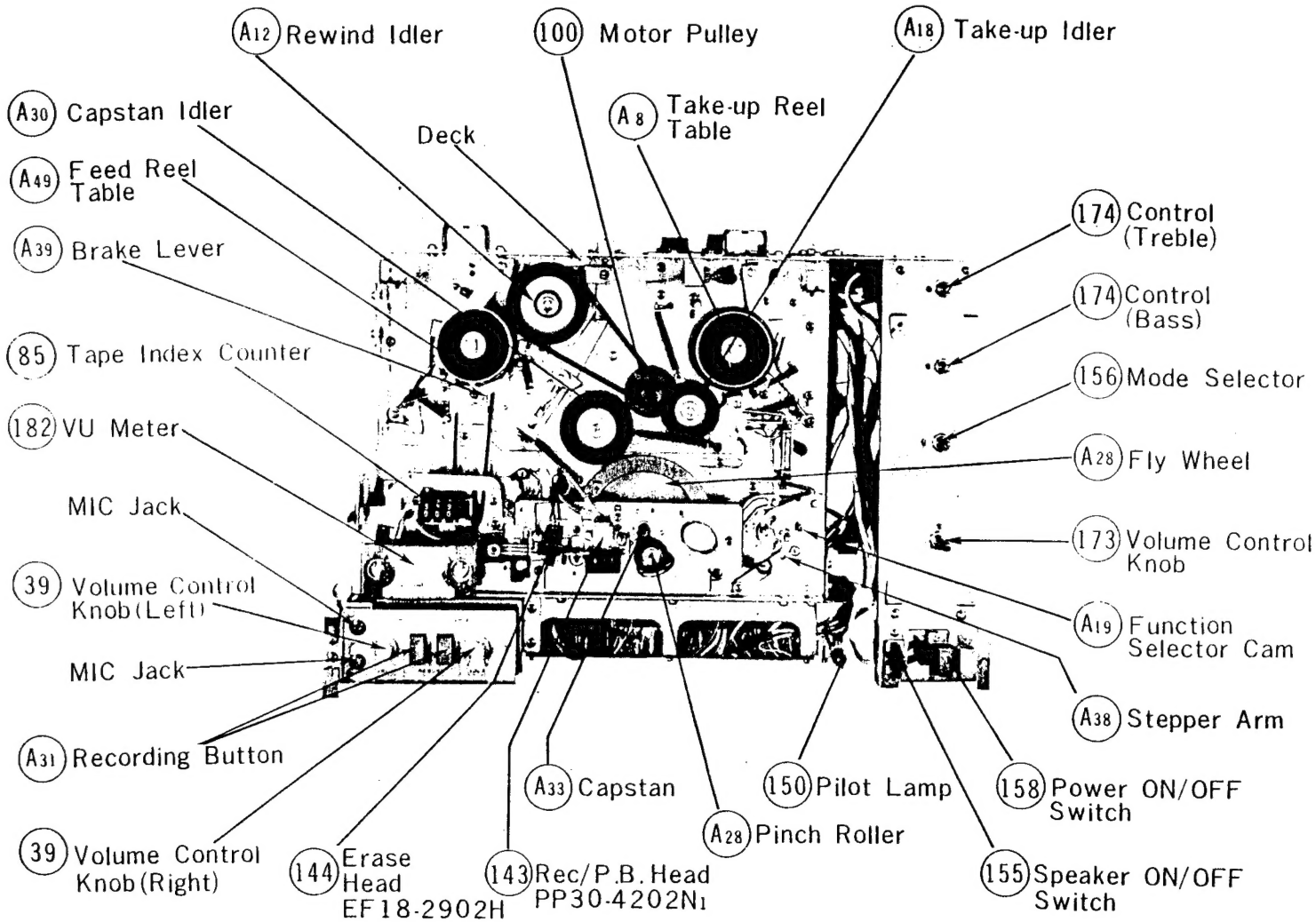
Pre-Amplifier



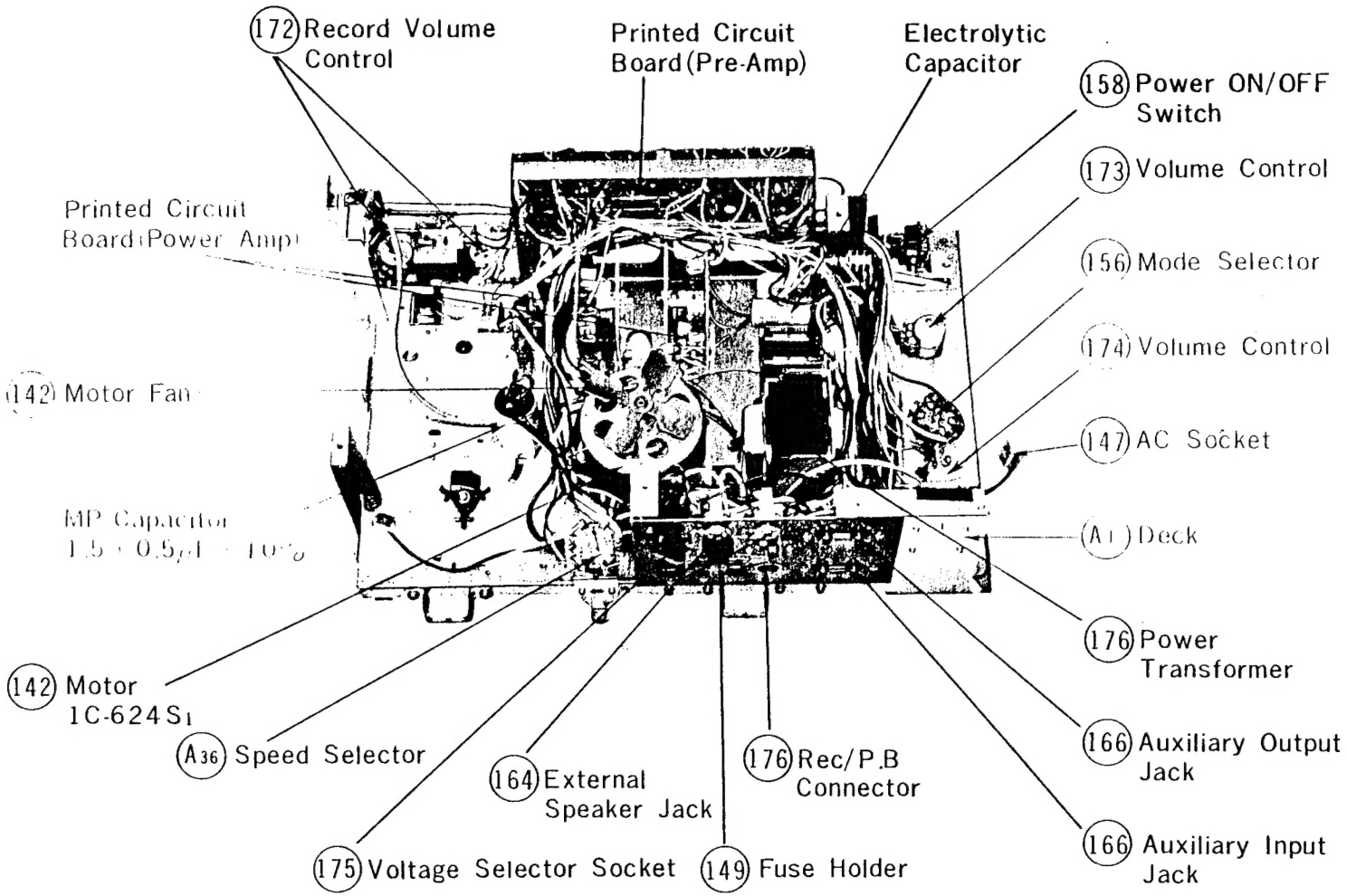
Cabinet Top View



Chassis Top View



Chassis Bottom View



Removal of Cabinet

(1) Turn up-side down the recorder on a soft pad.
(2) Remove five screws (⊕RF 4φ×15 marked with ▲ in Fig. 5), two screws (⊕RK 4φ×35 marked with △ in Fig. 5), seven Cabinet Spacer and Fuse Holder as shown in Fig. 5.
(3) Lift up the cabinet gently.

Removal of Reel Panel

(1) Remove Head Cover in Fig. 2.
(2) Remove Function Selector Knob, Speed Selector Knob, Pinch Roller and Instant Knob by loosening the respective Set Screws in Fig. 2.
(3) Remove two Screws (⊕B 3φ×6 marked with ▼ in Fig. 6), two 3φ Washers, one Screw (⊕B 2.6φ×10 marked with ▽ in Fig. 6) and one Washer as shown in Fig. 6.
(4) Remove two Tape Guide Pin as shown in Fig. 6.
(5) Now Reel Panel can be removed and main mechanism can be checked.
NOTE: When re-assemblying the Reel Panel, the shafts of knobs must be located just at the center of the respective holes.

Removal of Control Panel

(1) Remove the Control Knobs, (Treble, Bass, SP. mode) and Volume Control Knob in Fig. 2.
(2) Turn up-side down the recorder on a soft pad.
(3) Remove four Nuts (3φ marked with ● in Fig. 7.)
(4) Turn lower-side up gently.
(5) Lift up the Control Panel gently as shown in Fig. 7).
NOTE: When re-assemblying the Control Panel, the side (marked with ○ in circle in Fig. 7) must to touch uniformly.

Removal of Printed Circuit Boards

Printed Circuit Boards can be checked without disassembling. When it is necessary to remove the Circuit Boards, proceed as follows:

Circuit Board for Pre-Amplifier Section

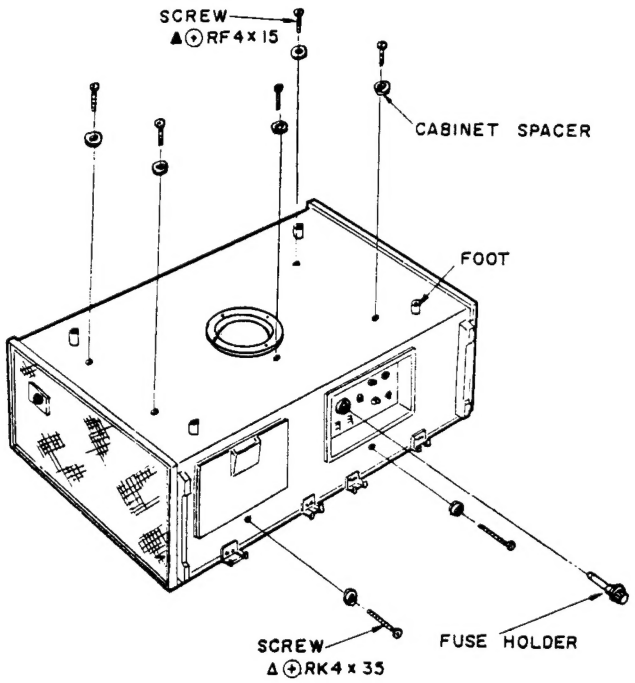
(1) Remove three screws (⊕RF φ4×6 marked with ○ in Fig. 8) and three spring washers as shown in Fig. 8.
(2) Take out two holding screws (⊕RF 3φ×6 marked with ● in Fig. 8) and two spring washers and two washers as shown in Fig. 8.

Circuit Board for Power Amplifier Section

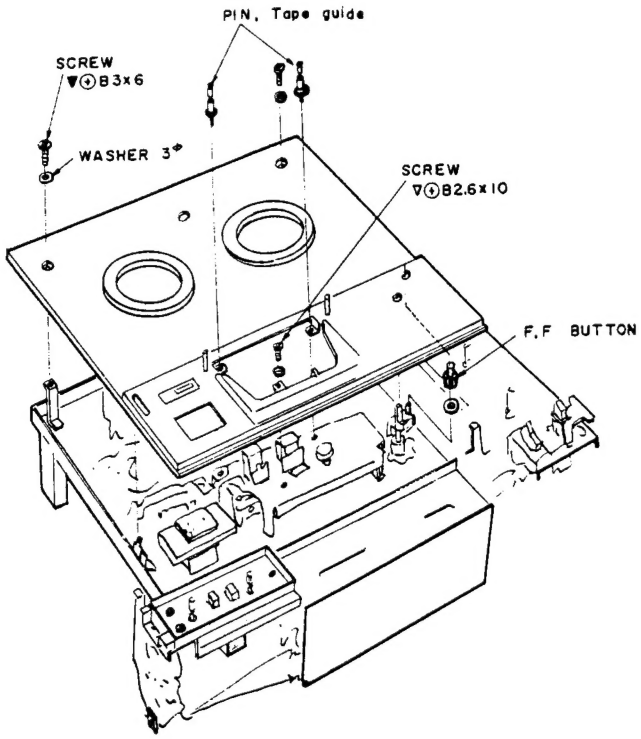
(1) Remove the three screws (⊕RF 3φ×6 marked with △ in Fig. 9), three spring washers and three washers of channel-1 as shown in Fig. 9.
(2) Channel-2 is same as channel-1.

Circuit Board for Power Supply and OSC Section

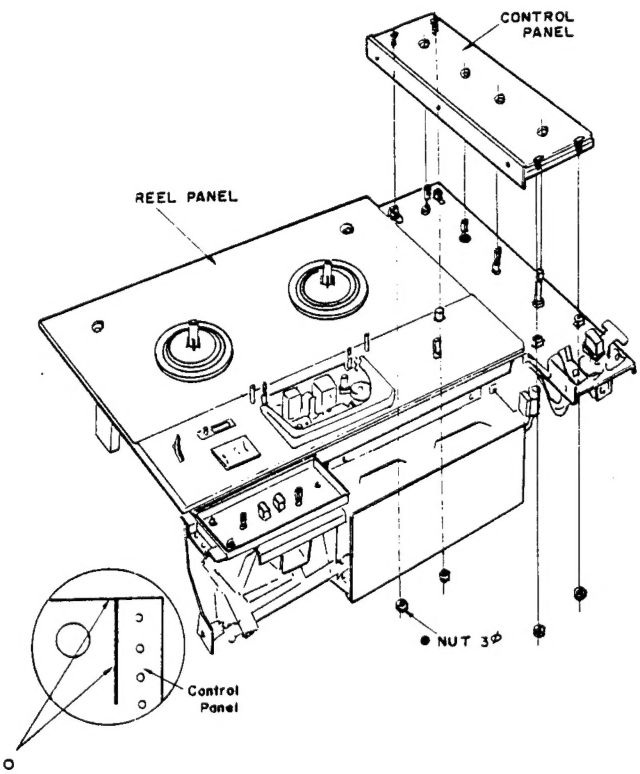
(1) Remove the three screws (⊕RF 3φ×6 marked with ▲ in Fig. 10) and three spring washers as shown in Fig. 10.



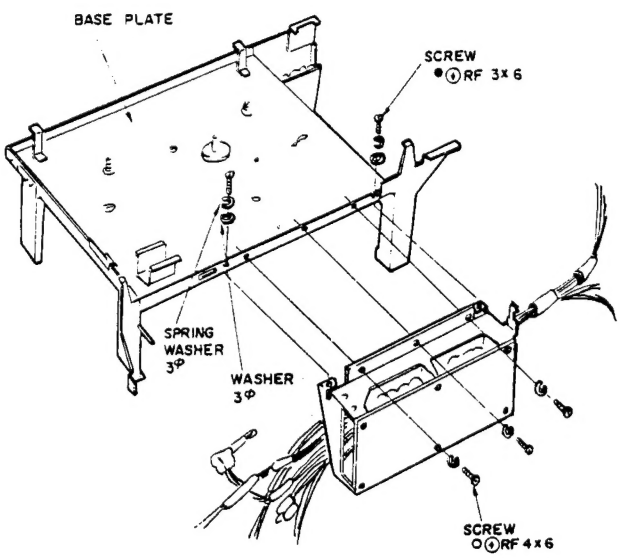
(Fig. 5)



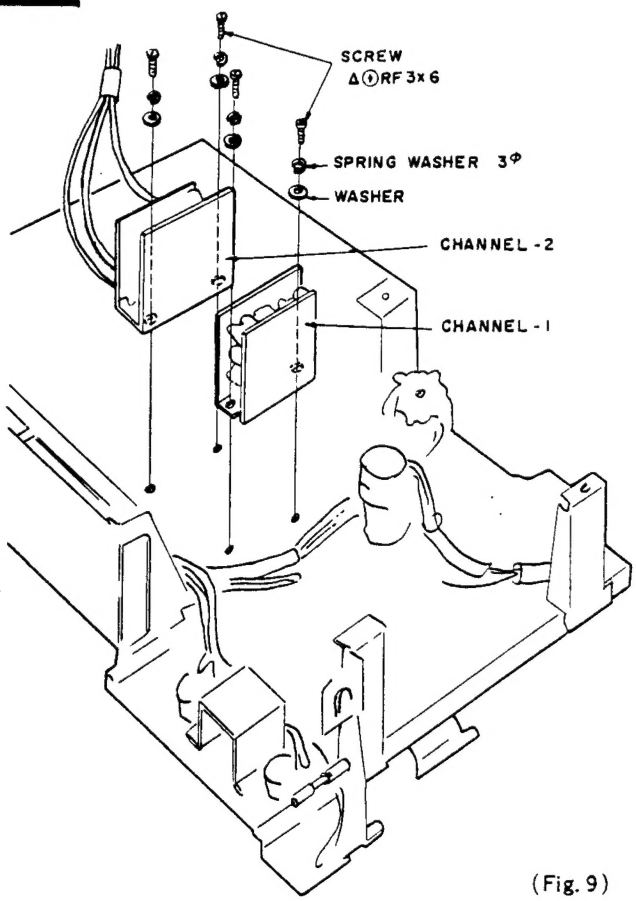
(Fig. 6)



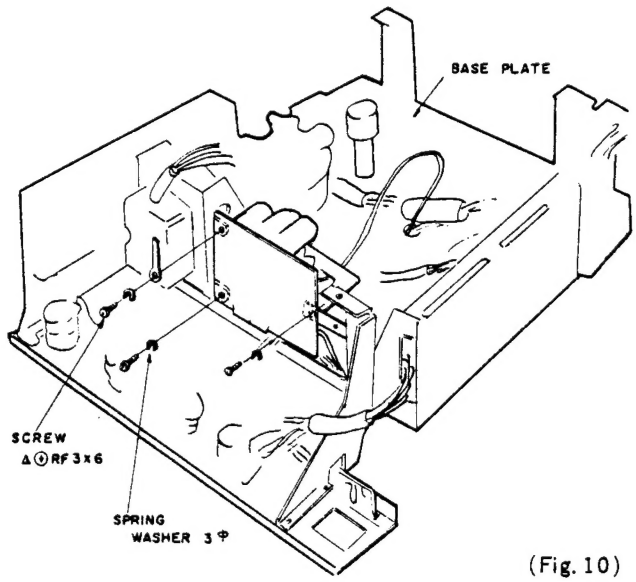
(Fig. 7)



(Fig. 8)



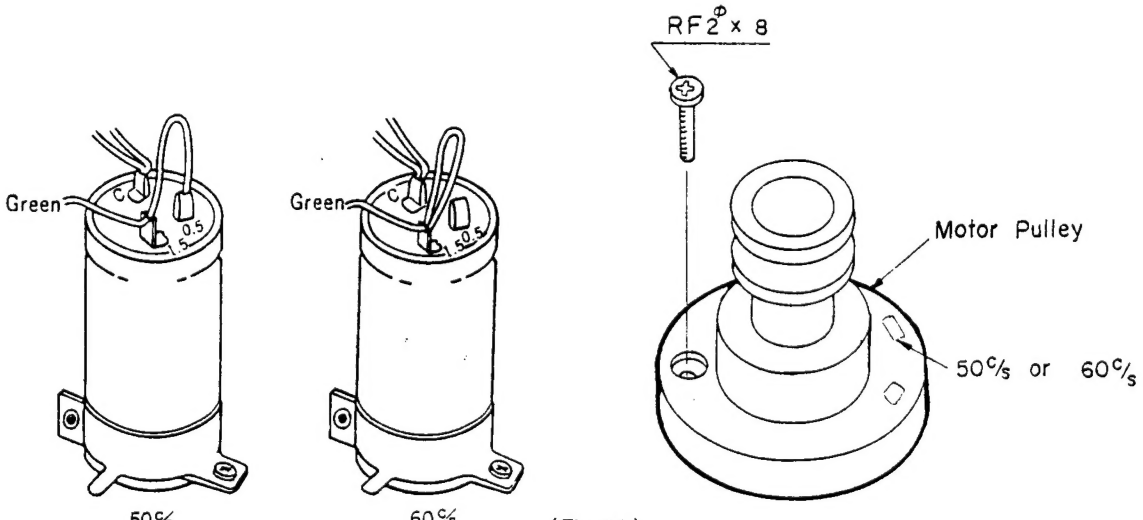
(Fig. 9)



(Fig. 10)

Modification to different Power line frequency

	For 50 c/s	For 60 c/s
1. Connection between terminals of the Metalized Paper Capacitor (MP.)	Connected (1.5μF-0.5μF)	Disconnected (1.5μF)
2. Motor Pulley	3-418-210-45.46 mmφ	3-418-211-37.8 mmφ



50c/s 60c/s

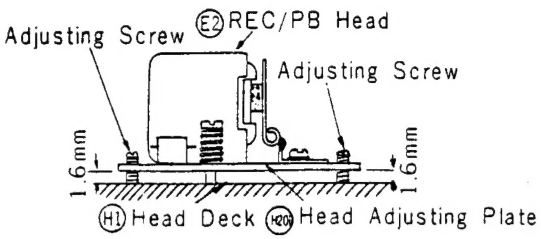
(Fig. 11)

Mechanical Adjustment

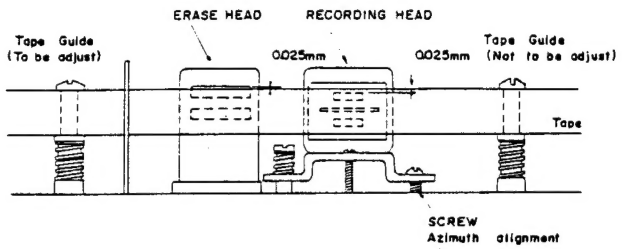
Elevation Alignment

The exact vertical positionings of Head are adjusted at the factory and should never need readjustment.
However, when replacing Head or Tape Guide, height of the replaced part in relation to the tape should be checked as follows:

(1) Thread a tape.
(2) Align the upper edges of the Head Cores and upper edge of the tape by turning the Tape Guide located on the left side of the Erase Head.
(3) Turn the Tape Guide clockwise by approximately 20° from the position obtained in the preceding process, so that the upper edge of the tape is approximately 0.025 mm lower than that of the Erase Head Core.



(Fig. 12)

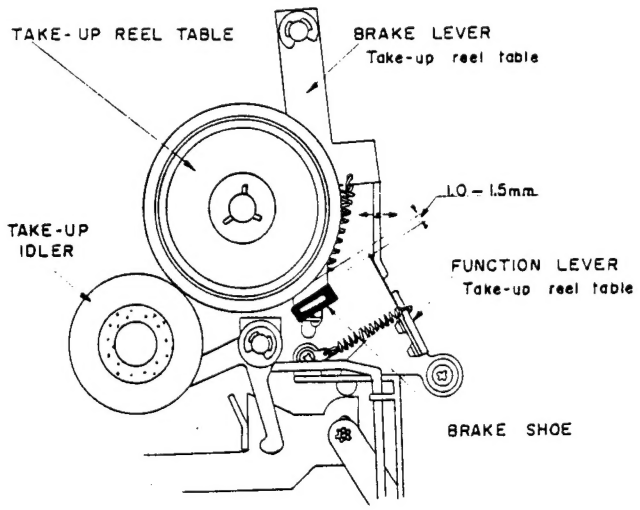


(Fig. 13)

Brake Alignment

When the tape slacks at stop mode, adjust the Brake as follows. Refer to Fig. 14.

(1) Set the Function Selector Knob to forward position.
(2) Bend the Brake Operating Levers to right or left, so that the clearance between the Brake Shoe and the take-up Reel Table must keep between 1.0~1.5 mm.



(Fig. 14)

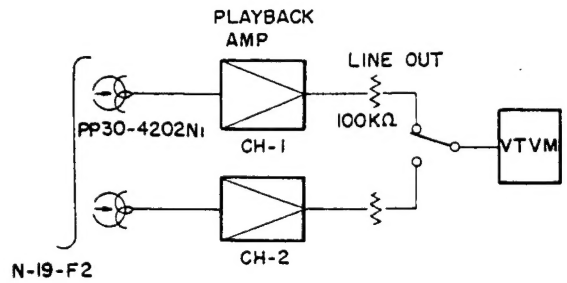
Electrical Adjustment

The alignment is to be performed at a tape speed of 7½ ips unless otherwise specified. Connect an 8Ω load resisitor in parallel with the VTVM terminals and connect the VTVM to the Speaker Output Jack.
Set the Speaker ON/OFF Switch on.

Playback Azimuth Alignment

(1) Playback a 10 Kc signal of -22 dBs recorded on the first section of the SONY alignment tape (N-19-F2).

(2) Adjust the Azimuth Alignment Screw located on the right side of the Playback Head to obtain maximum reading on the VTVM.



(Fig. 15)

Bias Trap Adjustment

(1) Before adjustment, turn the core counter-clockwise to the full.

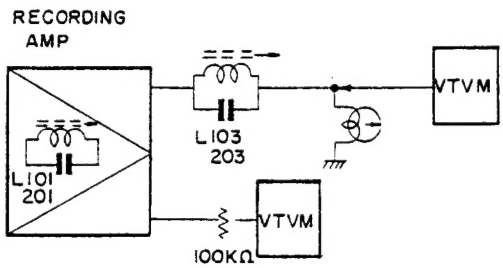
(2) Connect the VTVM across the Recording Head.

(3) With the Trimmer Capacitor set to maximum, place the set in record mode.

(4) Adjust the Trap Coil L_{103} (L_{203}) so that the VTVM indicates maximum.

(5) Connect the VTVM to Line Output.

(6) With the Recording Volume Control set to maximum, adjust the Trap Coil L_{101} (L_{201}) so that the VTVM indicates minimum.



(Fig. 16)

Playback Level Adjustment

(1) Set the Tone Control to the center position.

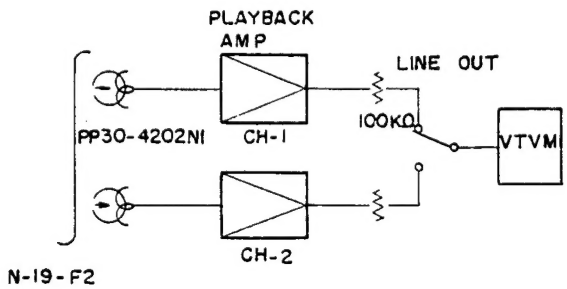
(2) Playback a 700 c/s signal of -22 dBs recorded on the third section of the SONY alignment tape (N-19-F2) and measure the output with the VTVM.

(3) Playback a 10 Kc signal of -12 dBs recorded on the fourth section of the SONY alignment tape.

(4) Adjust the Potentiometer R_{116} (R_{216}) so that the VTVM indicates the same value as obtained at the third section.

(5) When playing back a 10 Kc/s signal, check the Azimuth Alignment Screw again.

(6) Apply locking point over the Azimuth Alignment Screw.



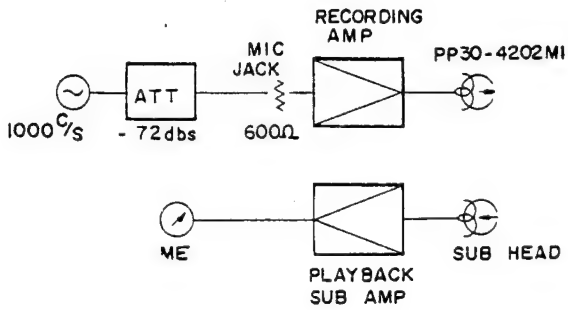
(Fig. 17)

Recording Bias Alignment

(1) Set the machine in record mode.

(2) Connect a VTVM across winding of the Rec./P.B. Head of Channel 1 (Channel 2).

(3) Adjust the Trimmer Capacitor C_{303} (C_{304}) shown in Fig. 18 so that the VTVM indicates approximately 40 V.



(Fig. 18)

Recording Level Alignment

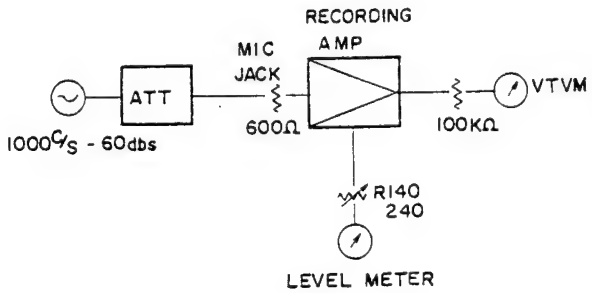
(1) Set the Speaker ON/OFF Switch OFF.

(2) Place the set in stereo recording mode.

(3) Feed a 1000 c/s signal of -60 dBs (0.775 mV) into Mic Input Jack.

(4) Turn the Recording Volume Control R_{157} (R_{257}) so that the VTVM indicates +1 dBs (0.80V).

(5) Turn the Adjustable Resistor R_{140} (R_{240}) so that the pointer of the Level Meter is just at the boundary between the Red portion and the Black portion.

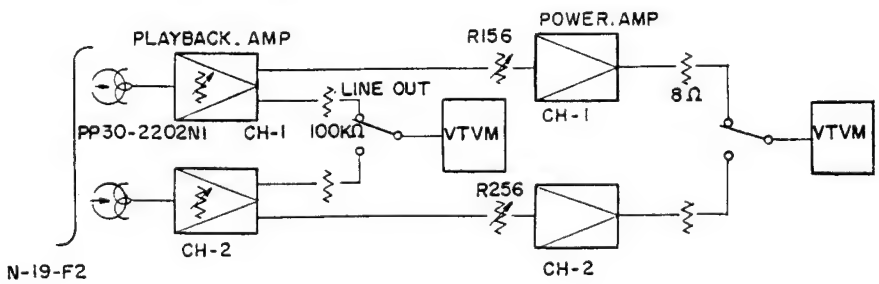


(Fig. 19)

Playback Output Level Adjustment

(1) Playback a 700 c/s signal of -12 dBs recorded on the second section of the SONY alignment tape (N-19-F2).

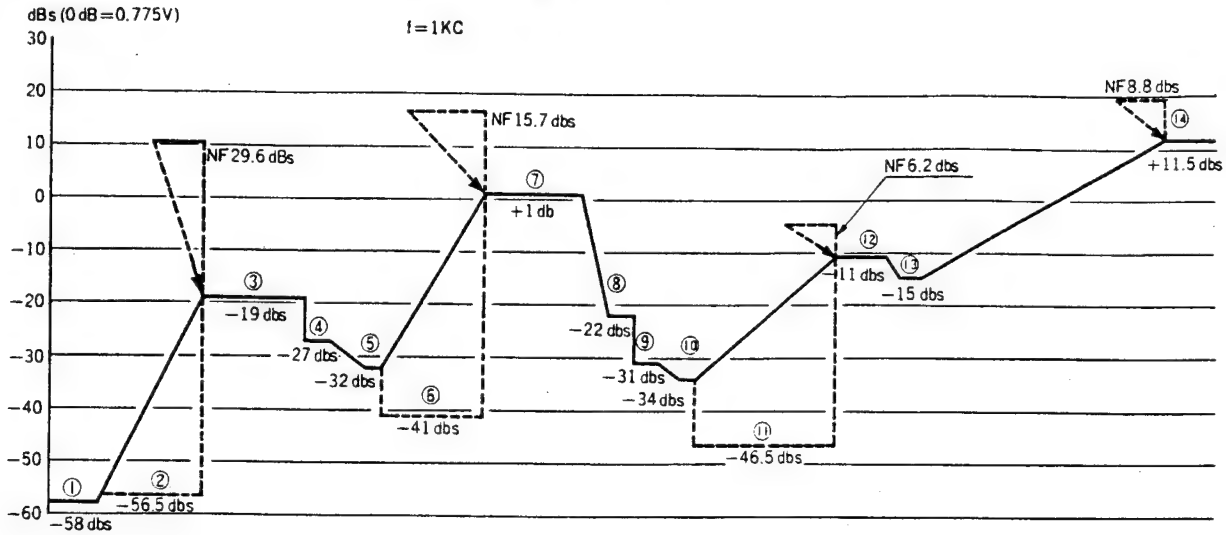
(2) Adjust the Potentiometer R_{119} (R_{219}) so that the VTVM indicates 0 dBs (0.775V).

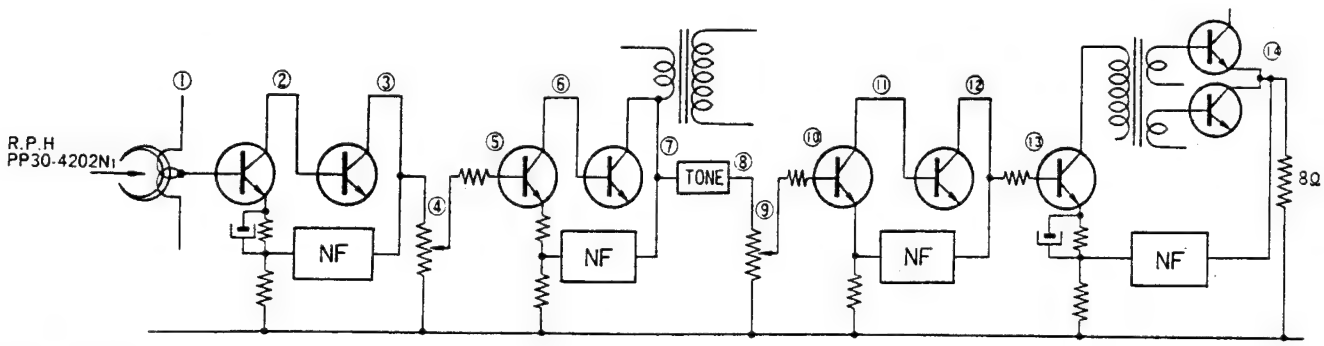


(Fig. 20)

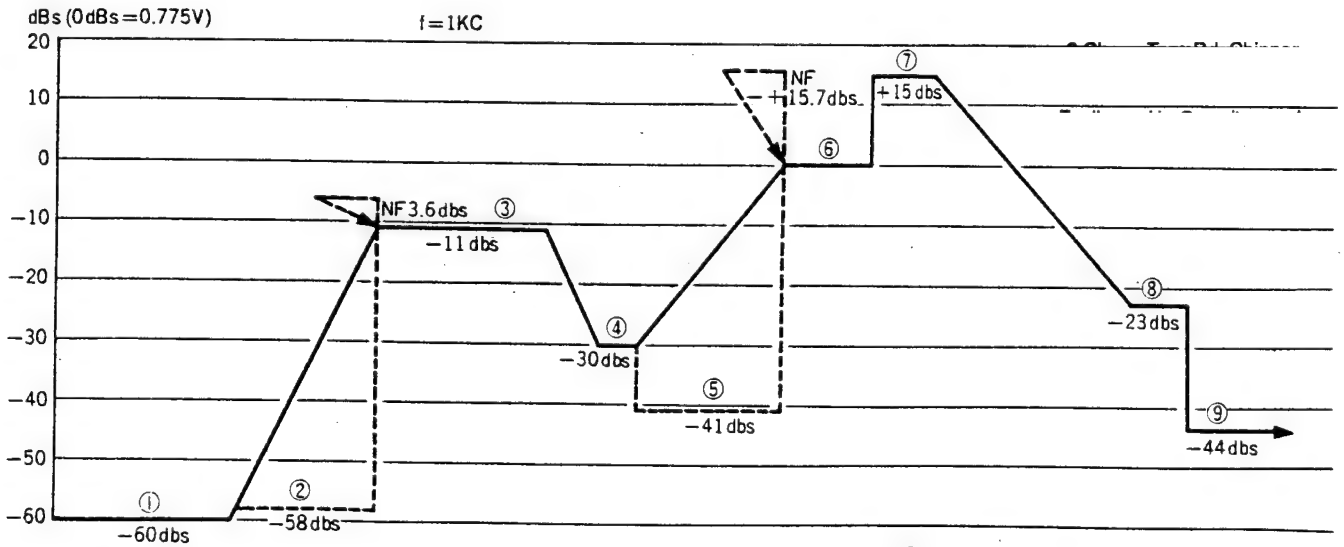
Level Diagram

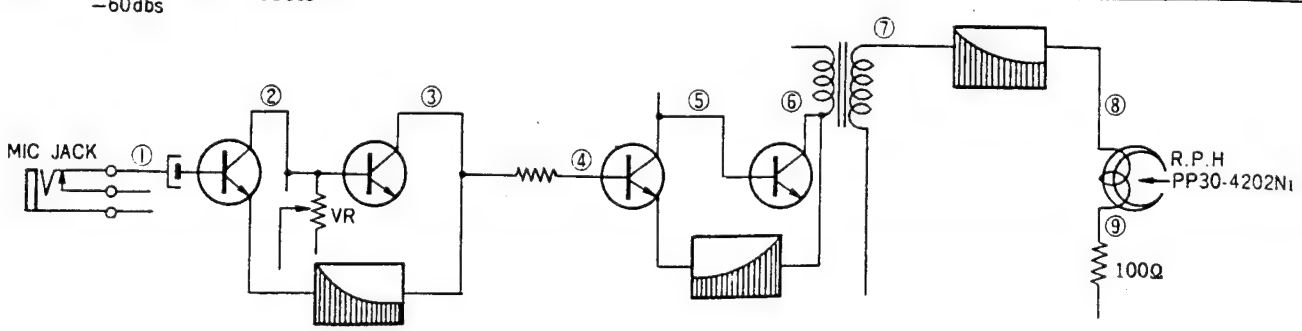
Playback



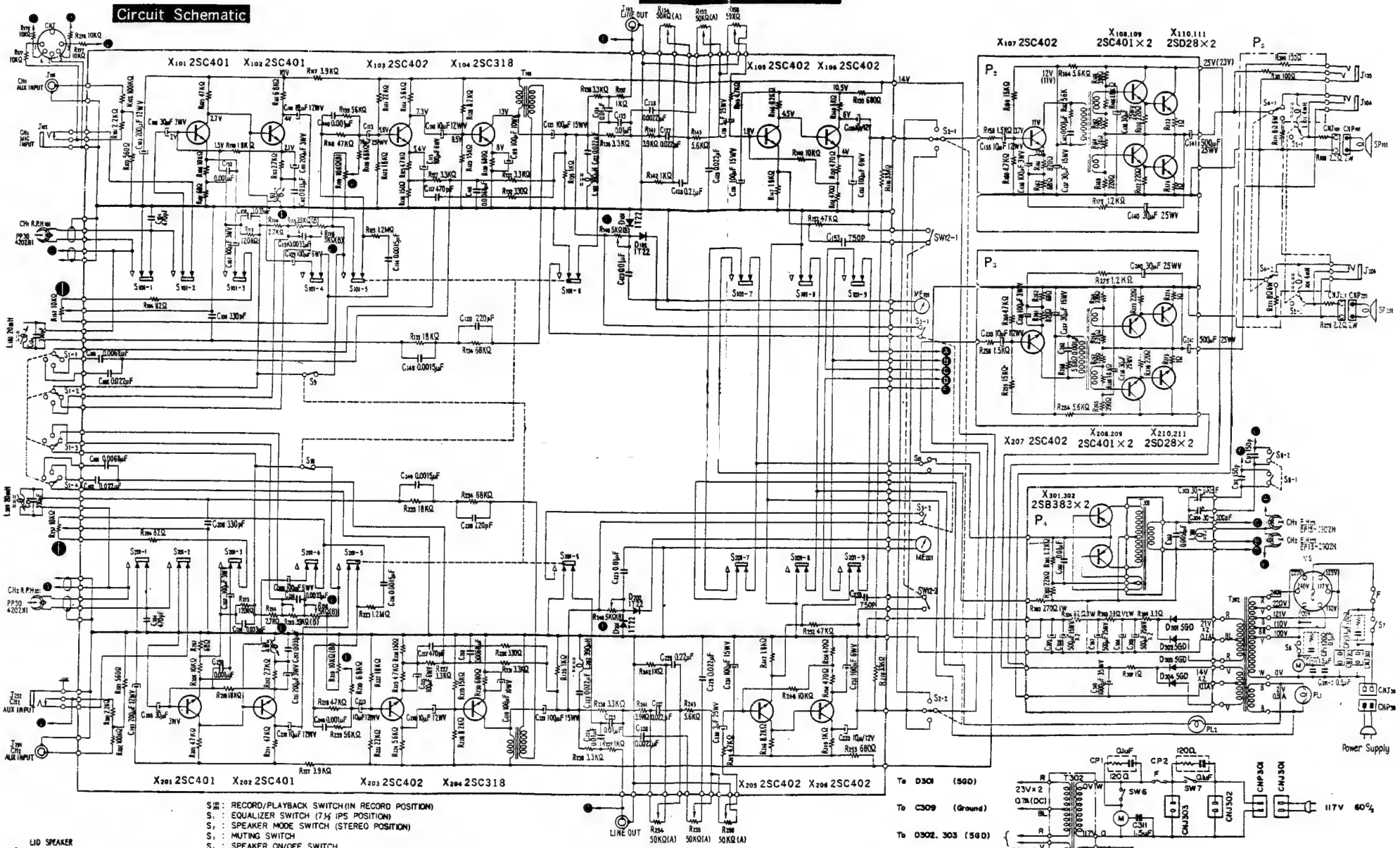


Recording





Circuit Schematic



S1 : RECORD/PLAYBACK SWITCH (IN RECORD POSITION)
S2 : EQUALIZER SWITCH (7½ IPS POSITION)
S3 : SPEAKER MODE SWITCH (STEREO POSITION)
S4 : MUTING SWITCH
S5 : SPEAKER ON/OFF SWITCH
S6 : EXT SP./LID SP. SWITCH
S7 : AUTOMATIC SHUT-OFF SWITCH
S8 : POWER ON/OFF SWITCH
S9 : BIAS CONTROL SWITCH (OFF IN 1⅞ ON IN 3¾ & 7½ IPS)
S10 : MONAURAL/RECORD SELECTOR SWITCH
S11 : BIAS ON/OFF SWITCH (FORWARD POSITION)
S12 : NOISE SUPPRESSOR ON/OFF SWITCH
VOLTAGE INDICATIONS IN ( ) ARE WHEN DELIVERING 1W×2 POWER OUTPUT.

R114, 214 / R116, 216 } Playback Level Adjustment
R157, 257 / R140, 240 } Recording Level Adjustment
R119, 219 Playback Output Level Adjustment

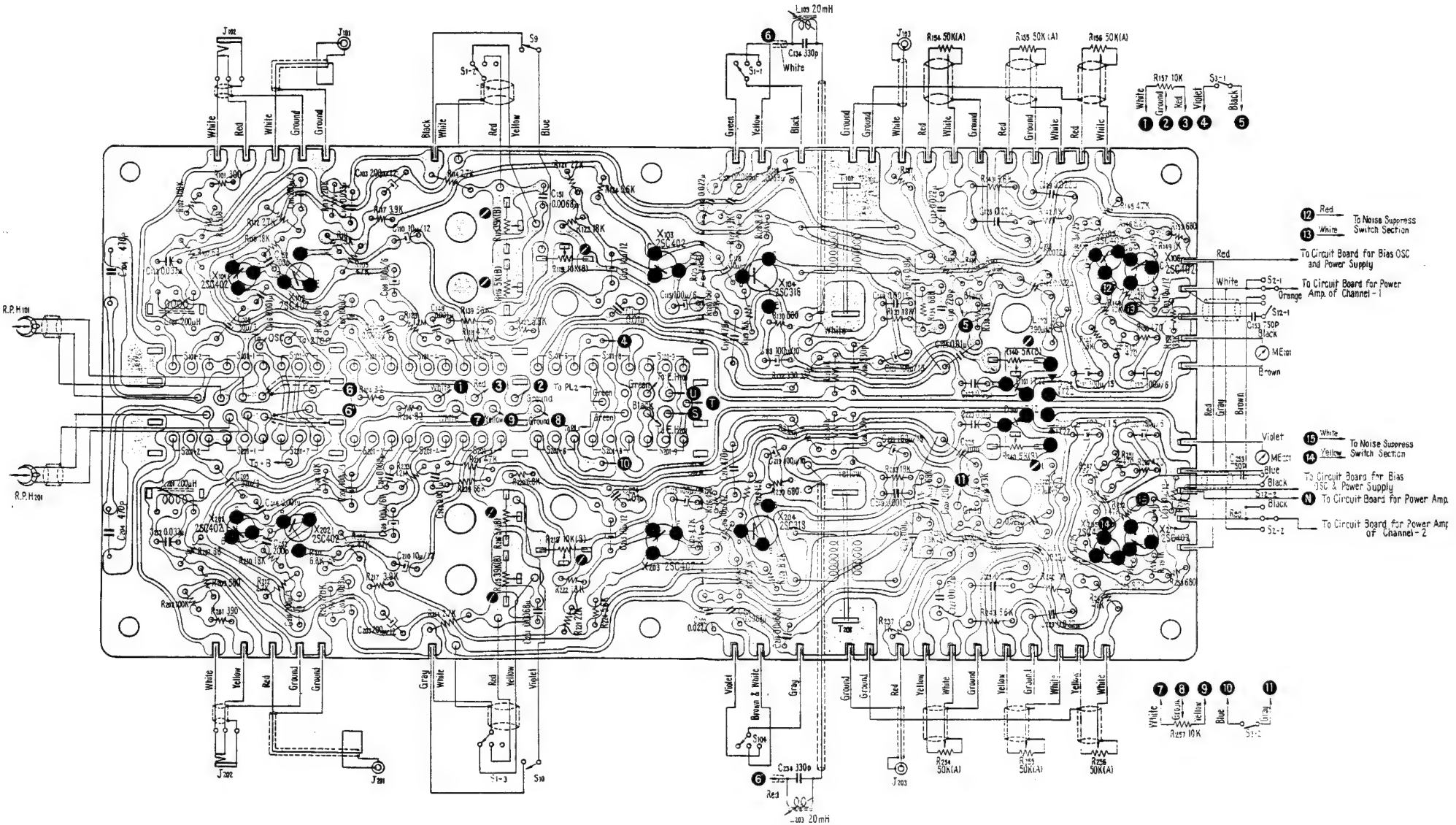
To D301 (5G0)
To C309 (Ground)
To D302, 303 (5G0)
To C310 (Ground)
To D304 (5G0)
To S101, 201

Mounting Diagram

Pre–Amplifier Section

— Conductor Side —

P.

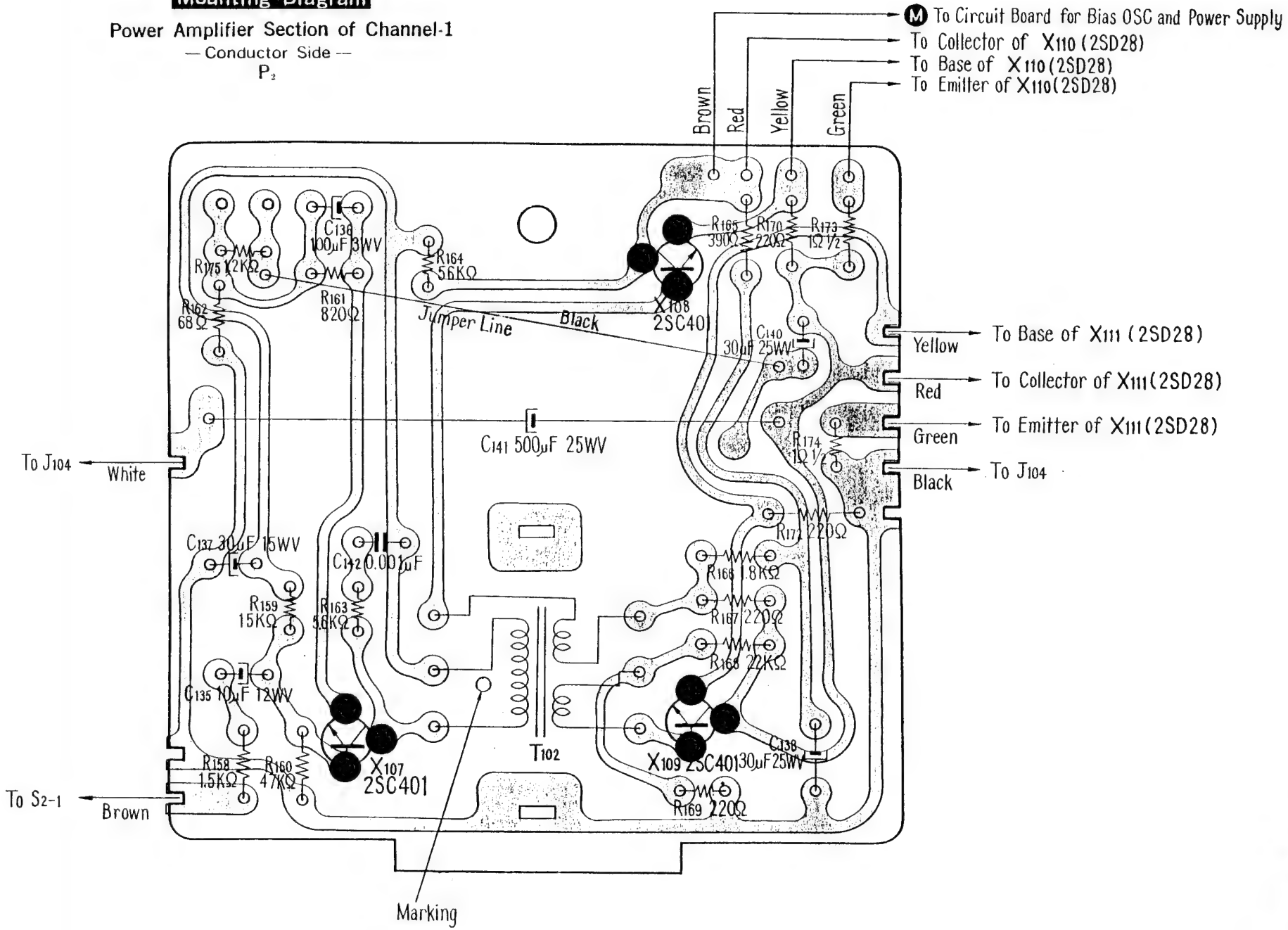


Mounting Diagram

Power Amplifier Section of Channel-1

— Conductor Side —

P_2

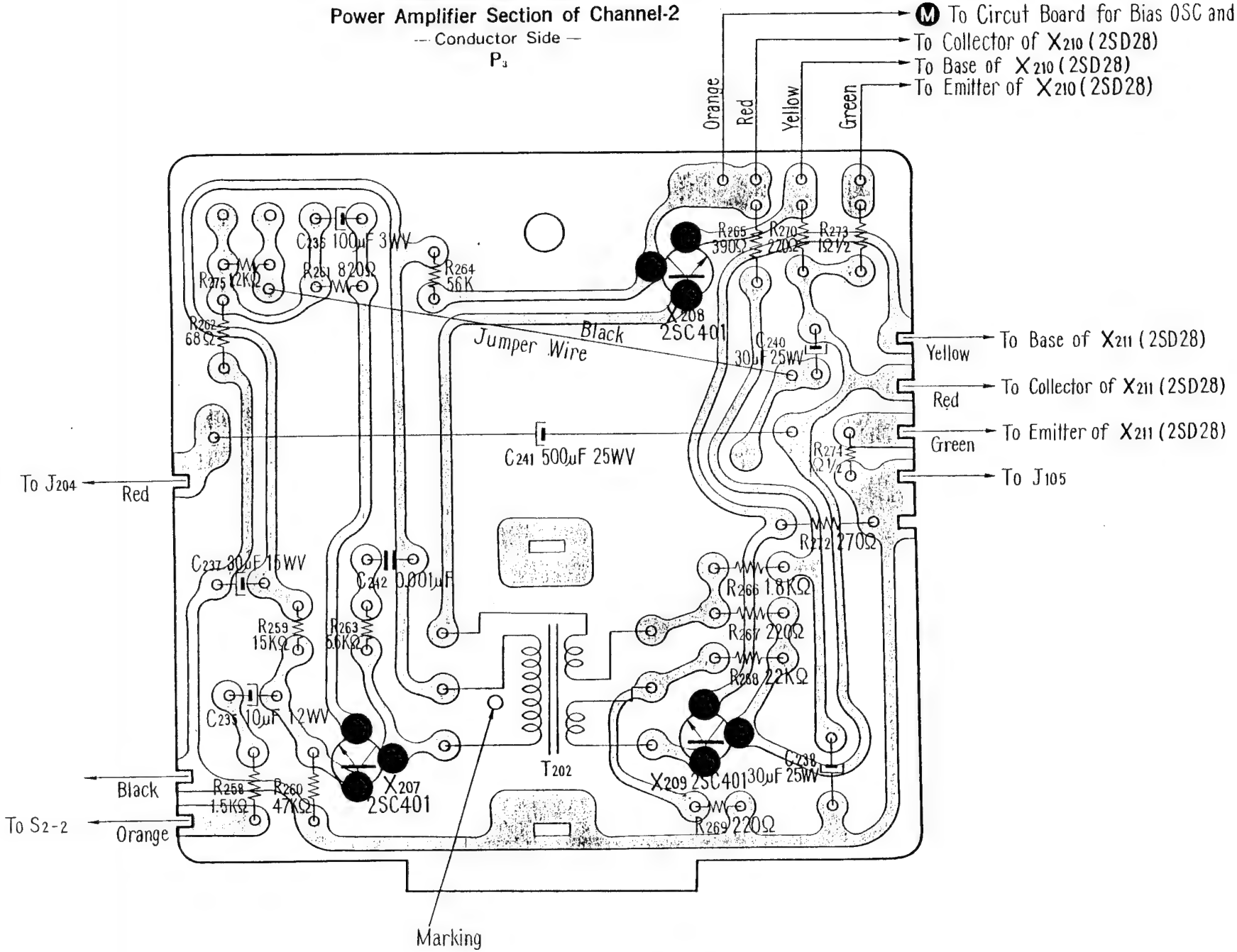


Mounting Diagram

Power Amplifier Section of Channel-2

— Conductor Side —

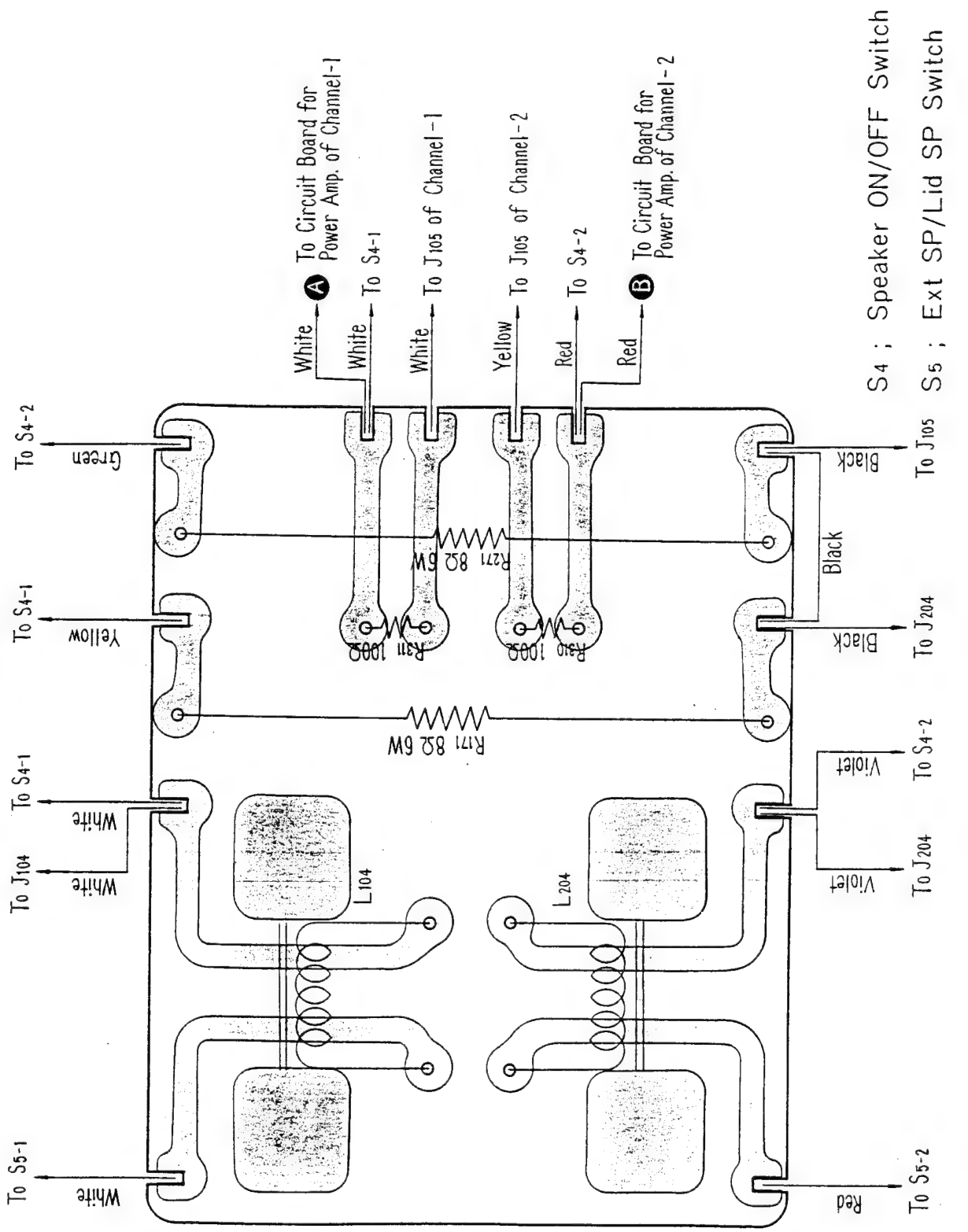
P_3



Mounting Diagram

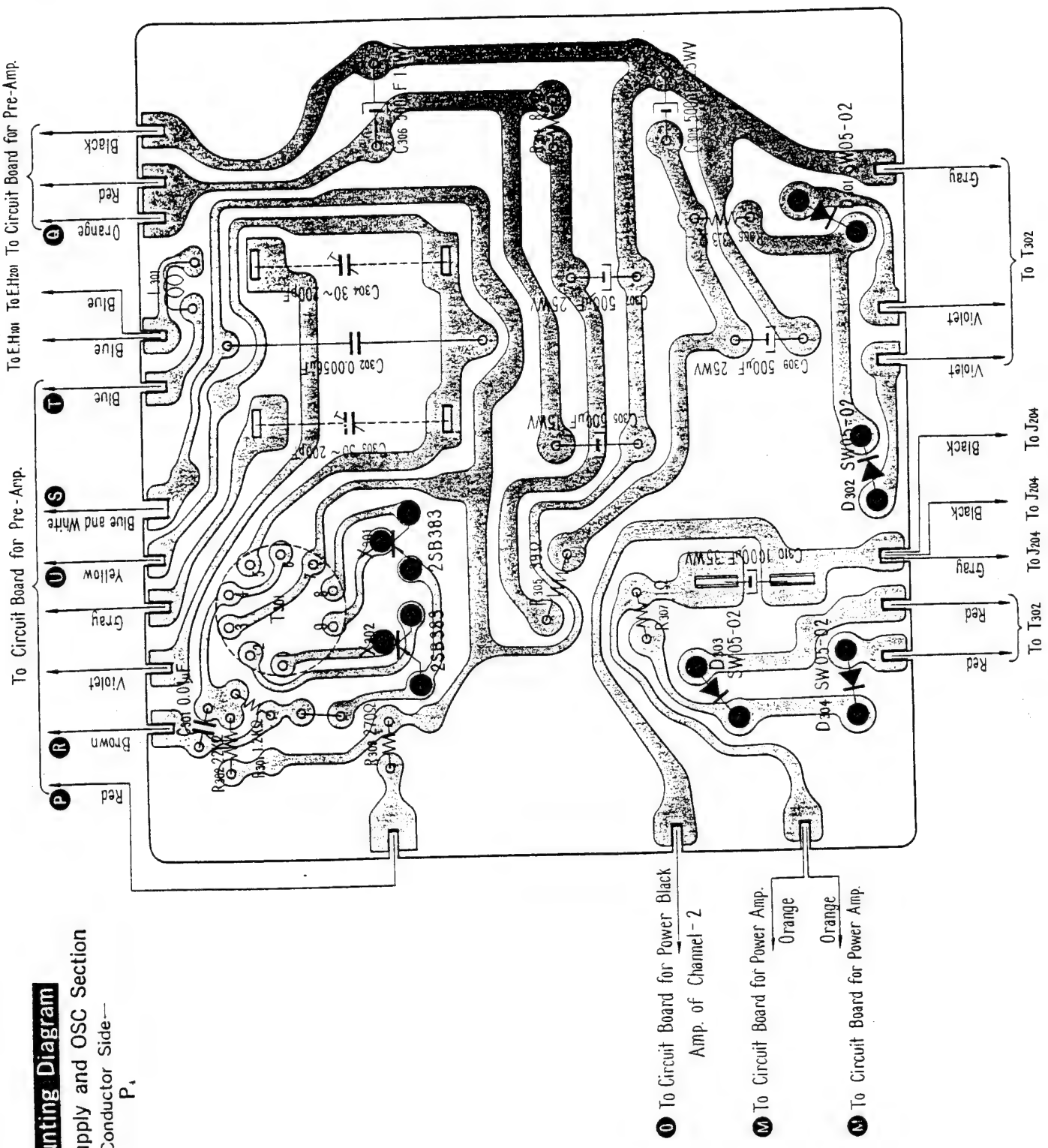
Speaker Circuit Section

—Conductor Side—
P_5



Mounting Diagram

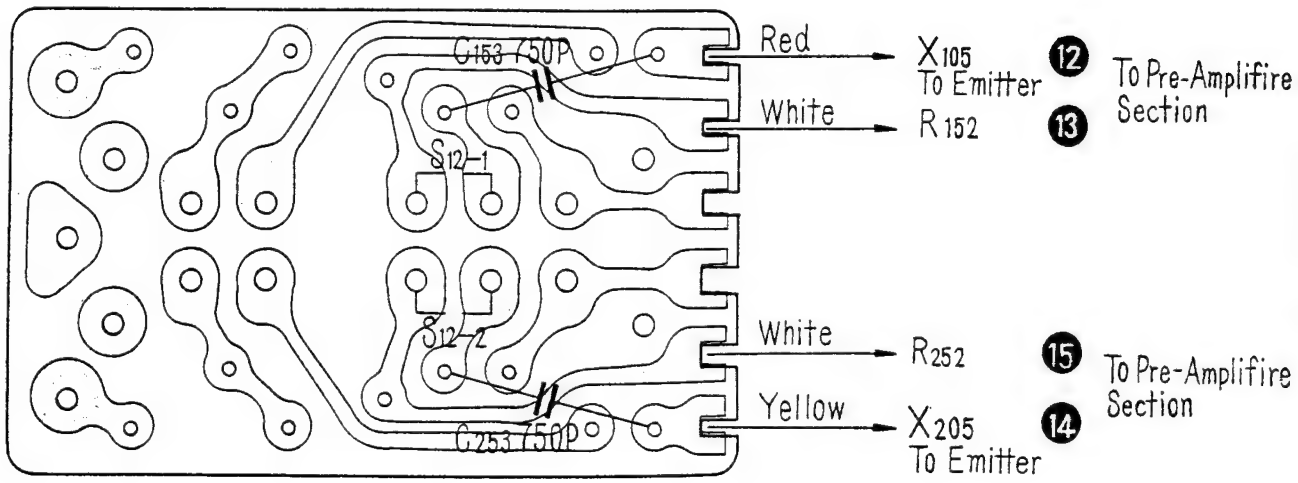
Power Supply and OSC Section
—Conductor Side—
P_4



Mounting Diagram

Noise Suppress Switch Section (additional)

—Conductor Side—



2nd Revision

Ref. No.	Part No.	Description
A1	X-34300-01-	*BASS PLATE, chassis
A3	-03-	*SPRING, take-up and feed reel retainer
A2	-02-	*LEVER, capstan idler, release
	-04-	*COVER, head
A4	-05-	*PANEL, control
	-07-	*BRACKET, power transformer
A5	-08-	*BRACKET, binaural monitor jack
A6	-09-	*KNOB, speed selector
A7	-10-	*FRONT PANEL
A8	-14-	*TABLE, take-up reel
A9	-15-	*TABLE, feed reel
A10	-16-	*LEVER, record clank
A11	-17-	*LEVER, rewind idler
A12	-19-	*IDLER, rewind
A13	-20-	*BRACKET, jack, socket and fuse holder
A14	-21-	*LEVER, automatic shut-off actuator
A15	-22-	*BRACKET, front panel retainer
A16	-23-	*HEAD DECK
A17	-24-1	*BOARD, speaker box right; black
A18	-25-	*IDLER, take-up
A19	-26-	*CAM, function selector
A20	-27-	*LEVER, take-up idler
	-28-3	CARTON ASS'Y
A21	-29-	*PANEL, reel
A22	-30-	*CABINET, body
	-38-	*BRACKET, volume control
A43	-39-	*TAPE INDEX COUNTER
A24	-31-	*CABINET LID, right
A25	-32-	*CABINET LID, left
A26	-33-	COMPLETE CABINET ASS'Y
A23	-34-	*LEVER, function selector; slide on base plate
	-35-	BRAKE LEVER ASS'Y
A28	-37-	*SHAFT, pinch roller
A33	X-34180-04-	*SHAFT, capstan
A34	-06-	ARM, capstan idler
A35	-08-	LEVER, tape speed selector
A36	-14-	JOINT LEVER, function selector cam and function selector lever
A37	-27-	CAM, pinch lever
A38	-30-	ARM, stepper
A40	-37-	*KNOB, function selector
	-33-	*PLATE, motor pulley; round shape
A29	X-34240-02-	*SHAFT, pinch lever
A39	X-34300-40-	*BRAKE, instant stop
A30	X-00270-03-	*IDLER, capstan
A31	X-34130-11-	*BUTTON, recording
A32	-12-	BUTTON ASS'Y, power
A41	X-34193-03-	KNOB ASS'Y, bass, treble mode
A42	-04-	KNOB ASS'Y, volume control; left
	X-34308-01-	SHIELD PLATE ASS'Y, rec/P.B. head
	3-430-115-	COVER, pre-amplifier; fiber
1	-152-	BRACKET, trap coil
2	-153-	PLATE, microphone jack; bakelite
3	-154-	BRACKET, speed selector shaft
4	-155-	PLATE, automatic shut-off actuator switch
5	-156-	SPRING, pinch lever cam
6	-157-	BRACKET, recording clank
7	-158-	SHAFT, fast forward
8	3-430-159-	WASHER, capstan shaft; black
9	-160-	WASHER, take-up and feed reel spindle
10	-161-	PULLEY, feed reel spindle
11	-162-	BRACKET, speed equalizer switch
12	-163-	DECORATION PLATE, record control
13	-165-	JOINT LEVER, recording clank
14	-166-	ROD, recording clank
15	-167-	LEVER, record button
17	-169-	BRACKET, recording
18	-170-	SPACER, clank
19	-171-	LEVER, recording of channel 1
20	-172-	LEVER, recording of channel 2
21	-173-	ROD, rec/P.B. selector switch
22	-174-	BRACKET, rec/P.B. amplifier
23	-175-	BRACKET, leg; power supply and oscillator block side
25	-177-	BRACKET, leg
26	-178-	BRACKET, volume and tone control
27	-190-	LEVER, instant stop
28	-191-	BRACKET, muting switch
29	-192-	BRACKET, power supply and oscillator
30	-193-	DECORATION PLATE, binaural monitor jack
31	-194-	BRACKET, cabinet and base plate
32	-195-	BRACKET, instant stop brake lever retainer
33	-196-	BRACKET, speed equalizer switch
34	-197-	WASHER, volume control
35	-198-	CAP, take-up idler
36	-199-	WASHER, recording button; black
37	-200-	WASHER, recording button; black
38	-201-	SHAFT, function selector
39	-202-	KNOB, record volume control
40	-203-	SHAFT, head cover
41	-206-	CAP, take-up and feed reel spindle
42	-209-	FELT, speaker box
43	-210-	BOARD, speaker box, left; black
44	-211-	CUSHION, VU meter
45	-212-	ROD, recording
46	-213-	SPRING, recording
47	-214-	TAPE GUIDE, left
48	-215-	SHAFT, tape guide, left
49	-216-	CUSHION, 2P connector
50	-217-	JOINT SPRING, instant stop lever
51	-219-	SPRING, recording clank
52	-220-	BRACKET, monaural switch
53	-221-	LEVER, feed reel brake arm
54	-222-	PLATE, feed and take-up brake arm joint
55	-223-	PLATE, spring holder
56	-225-	SPRING, feed reel brake lever
	-226-	BAG, polyethylene
57	-227-	CAM, fast forward
	-228-	DECORATION PLATE, jack
58	-230-	LEVER, take-up reel
59	-231-	FELT, pinch roller; oil absorbe
60	-232-	CAP, pinch roller
61	-233-	PINCH ROLLER
62	-234-	WASHER, pinch roller; nylon
63	-235-	SPACER, pinch roller; metal
64	-236-	WASHER, front panel; meta
65	-237-	SLEEVE, capstan shaft

* marked at top of part name means ASSEMBLY

Parts List

Ref. No.	Part No.	Description
66	3-430-238-	SPRING, capstan shaft
67	-239-	SPRING, feed reel brake
	-240-	CUSHION, rubber
	-048-	BOARD, speaker box right; black
	-245-	SHIELD PLATE, mic jack
	-246-	SPRING, switch holder
	-248-	BRACKET, micro switch holder
68	3-418-009-	SHAFT, pinch roller
69	-011-	JOINT, pinch lever and slider
70	-013-	SHIFTER, tape pad
71	-035-	ALIGNING PLATE, instant stop knob
72	-053-	CLANK, fast forward
73	-054-	SPACER, stepper arm
74	-055-	SHAFT, fast forward lock lever
75	-060-	SHAFT, capstan idler arm (Speed selector lever guide shift)
76	-069-	SPRING, capstan idler arm
77	-070-	SPRING, fast forward idler arm (Horizontal use)
78	-073-	SPRING, capstan idler arm shaft (Vertical use)
	-074-	SPRING, speed selector lever (Horizontal use)
79	-075-	SPRING, capstan idler release lever
80	-077-	SPRING, fast forward idler arm shaft (Vertical use)
81	-079-	SPRING, instant stop lever
82	-085-	SPACER, function selector cam shaft
83	-086-	SPACER, instant stop brake lever
84	-091-	SPRING, fast forward lock lever shaft
86	-107-	BRACKET, capstan holding
87	-111-	RING CAP, capstan holding
88	-112-	OIL RING, capstan holding
89	-113-	TAPE SUPPROT, right
90	-115-	NYLON WASHER, 8φ (outer diameter)
91	-137-	BUTTON, fast forward
99	-208-	BELT, rewind idler
100	-210-	PULLEY, 50 c/s, motor
92	-166-	WASHER, rewind idler; special
93	-167-	TAPE SUPPORT, left
	-168-	SPRING, rec/P.B. switch
94	-171-	SPRING, tape guide height adjusting
96	-191-	SCREW, rec/P.B. head height lock
97	-193-	KNOB, instant stop
	-194-	PINCH ROLLER
	0-051-235-	HOLDER CLAMP, cable
98	3-418-200-	SPRING, take-up brake
	3-442-064-	SPRING, brake block
	3-424-030-	ACTUATOR GUIDE
101	0-007-259-	PAD, erase head
102	-313-	HOLDER CLAMP, cable
106	0-027-216-	OIL RING, rewind and capstan idler
103	-035-	WASHER, take-up idler
104	-134-	SPACER, take-up brake arm, etc.
105	-193-	SPRING, pinch lever
107	-220-	WASHER, 5φ rewind idler; paper
108	-473-	PAD, rec/P.B. head
109	0-037-249-	SPLIT NUT 2φ
110	-406-	TAPE GUIDE
111	0-041-041-	WASHER, base plate; felt
112	-223-	SPACER, phone jack
113	0-056-247-	BELT, tape index counter
114	-322-	OIL RING, take-up idler
115	3-005-001-	SPRING, rec/P.B. head
116	3-103-139-	HUM proof ring
117	-140-	SUPPORT, hum-proof ring
118	-206-	WASHER, cabinet; back side
	-527-	BINDER, rubber
122	3-402-654-	TAPE PAD HINGE, rec/P.B. head
123	-655-	TAPE PAD HINGE, erase head
124	-764-	SPACER, speed selector knob shaft
126	2-409-102-	WASHER, fast forward button and pinch roller shifter shaft; nylon
127	-108-	WASHER, front panel and reel panel; nylon
128	-124-	WASHER, recording lever; nylon
129	-133-	SPRING, rec/P.B. selector switch
130	-158-	SPRING, recording clank
131	-163-	WASHER, take-up and feed reel; nylon
132	-191-	WASHER, cabinet; bottom side
134	3-412-059-	SCREW, front panel
135	3-413-029-	BRACKET, wire retainer
140	3-420-076-	FELT, vibration absorber
	3-427-291-	CAUTION LABEL
136	3-419-091-	WASHER, treble, bass mode control knob; black
137	-211-	CAM, capstan idler
138	-345-	HEAT SINK, power amplifier
139	-353-	KNOB, volume control channel-1
	3-401-156-	SPACER, microphone jack
	-179-	PLATE, lug
	-100-	RUBBER, vibration absorber
	3-424-073-	BUSHING, pinch lever
	3-701-007-	BELT, tie-up
	-029-01	TACK LABEL 60 c/s
	(-028-01)	〃 (50 c/s)
	3-430-803-	SHIELD PLATE
	3-431-161-01	SCREW, motor setting
		TRANSISTOR,
		2SC401; yellow mark $X_{101, 201, 102, 202}$
		2SC402 $X_{107, 207, 103, 203}$
		2SC402 $X_{105, 206, 106, 206,}$
		2SC318 $X_{104, 204}$
		2SC383 $X_{301, 302}$
		2SD28 $X_{110, 210, 111, 211}$
		2SC401 $X_{108, 208, 109, 209}$
		DIODE
		SW-05-02 $D_{301, 302, 303, 304}$
		1T22 $D_{101, 102, 201, 202}$
142	8-832-624-02	MOTOR, IC-624 S_1
143	8-821-242-26	REC/PB HEAD PP30-4202N,
144	8-826-629-21	ERASE HEAD EF18-2902H
176	1-441-262-13	TRANSFORMER, power T_{302}
177	1-427-174-	〃 output $T_{1061, 201}$
	1-423-114-	〃 input $T_{102, 202}$
179	1-433-081-	〃 bias oscillator T_{301}
145	1-409-106-	COIL, trap 20 mH $L_{103, 203}$
180	-083-	〃 trap 200μH $L_{101, 201}$
181	1-407-051-	INDUCTOR, micro 390μH $L_{102, 202}$
146	1-431-038-	COIL, dummy L_{301}
	1-421-153-	〃 filter choke $L_{104, 204}$
147	1-509-062-	SOCKET, AC
148	-015-	〃 AC outlet
149	1-533-012-	FUSE HOLDER
150	1-518-052-	PILOT LAMP
151	1-517-003-	SOCKET, pilot lamp
152	1-509-117-	CONNECTOR
153	1-502-125-	SPEAKER, cabinet side $SP_{101, 201}$

Parts List

Ref. No.	Part No.	Description
154	1-502-154-	speaker box $SP_{102, 202}$
182	1-524-035-	VOLUME UNIT METER
		SWITCH,
183	1-513-220-	rec/P.B. selector; slide $SW_{101, 201}$
159	-091-	speaker selector; slide SW_5
156	1-514-227-	speaker mode; rotary SW_2
157	-226-	speed equalizer; rotary SW_1
158	-140-	power on/off push SW_7
155	-091-	speaker monitor on/off; SW_4
160	-055-	bias control $SW_{3, 8}$
162	-039-	automatic shut-off SW_6
	-247-	monaural record; muting $SW_{9, 10}$
	-057-	micro switch
		JACK,
164	1-507-108-	external speaker; mini $J_{104, 204}$
	-053-	microphone input; mini $J_{102, 202}$
165	-106-	binaural monitor; phone J_{105}
166	-142-	auxiliary input and line out; $J_{101, 201, 103, 203}$
167	1-506-121-	CORD, external speaker
	1-101-030-	CAPACITOR, 200pF 50WV $C_{152, 252}$
	-534-	ENCAPSULATED COMPONENT, $0.1\mu F$ $+120\Omega$ $CP_{1, 2}$
175	1-117-036-	CAPACITOR, $1.5\mu F$ 250WV C_{311}
	1-141-010-	〃 trimmer $C_{303, 304}$
168	1-536-074-	TERMINAL STRIP
169	-061-	〃 〃 2-L-1
	1-538-464-	CIRCUIT BOARD
	-395-	CIRCUIT BOARD, pre-amplifier
	-396-	〃 power supply and OSC
	-397-	〃 power-amplifier
		VOLUME CONTROL,
172	1-221-749-	10KΩ record $R_{157, 257}$
173	-750-	50KΩ playback $R_{156, 256}$
		BASS AND TREBLE CONTROL,
174	-751-	50KΩ $R_{154, 254, 155, 255}$
		ADJUSTABLE RESISTOR,
170	-748-	5KΩ $R_{116, 216, 140, 240}$
171	-401-	10KΩ $R_{119, 219}$
		RESISTOR
	1-242-713-	47KΩ RD¼UR ±10% $R_{105, 205, 118, 218, 152, 252}$
	-703-	18KΩ 〃 〃 $R_{110, 210}$
	-697-	10KΩ 〃 〃 $R_{106, 206}$
	-687-	3.9KΩ 〃 ±5% $R_{115, 215}$
	1-214-721-	100KΩ RD¼UR ±10% $R_{102, 202}$
	-723-	120KΩ 〃 〃 $R_{113, 213}$
	1-242-715-	56KΩ 〃 〃 $R_{139, 239}$
	1-214-747-	1.2 MegΩ 〃 〃 $R_{123, 223}$
	-717-	68KΩ 〃 〃 $R_{134, 234}$
	1-242-705-	22KΩ 〃 〃 $R_{121, 221}$
	-703-	18KΩ 〃 〃 $R_{122, 222}$
	-701-	15KΩ 〃 〃 $R_{150, 250}$
	-697-	220KΩ 〃 〃 $R_{170, 270}$
	-695-	8.2KΩ 〃 〃 $R_{128, 228}$
	1-214-693-	6.8KΩ 〃 〃 $R_{111, 211}$
	1-242-691-	5.6KΩ 〃 〃 $R_{124, 224}$
	-689-	4.7KΩ 〃 〃 $R_{125, 225}$
	-687-	3.9KΩ 〃 〃 $R_{117, 217}$
	-685-	3.3KΩ 〃 〃 $R_{127, 227}$

Ref. No.	Part No.	Description
	1-242-683-	2.7KΩ 〃 〃 $R_{112, 212}$
	-679-	1.8KΩ 〃 〃 $R_{147, 247}$
	-675-	1.2KΩ 〃 〃 R_{301}
	-673-	1.0KΩ 〃 〃 $R_{135, 215}$
	-677-	1.5KΩ 〃 〃 $R_{158, 258}$
	-671-	820Ω 〃 〃 $R_{161, 261}$
	-709-	33KΩ 〃 〃 $R_{178, 278}$
	-713-	47KΩ 〃 〃 $R_{152, 252}$
	-657-	2200Ω 〃 〃 $R_{170, 270}$
	-669-	680Ω RD¼UL ±10% $R_{130, 230}$
	-667-	560Ω 〃 〃 $R_{103, 203}$
	-665-	470Ω 〃 〃 $R_{150, 250}$
	-661-	330Ω 〃 〃 $R_{132, 232}$
	-653-	150Ω 〃 〃 $R_{126, 226}$
	-649-	100Ω 〃 〃 $R_{310, 311}$
	-645-	68Ω 〃 〃 $R_{107, 207}$
	-647-	82Ω 〃 〃 $R_{104, 204}$
	-633-	22Ω 〃 〃 $R_{162, 262}$
	-613-	3.3Ω 〃 〃 R_{360}
	-601-	1Ω 〃 〃 $R_{169, 269}$
	-681-	2.2KΩ 〃 〃 $R_{168, 268}$
	1-204-679-	1.8KΩ RD¼UR ±10% $R_{166, 266}$
	-527-	39Ω RD½SP ±5% $R_{305, 173}$
	-528-	1Ω 〃 〃 $R_{173, 273}$
	-663-	390Ω RD¼UR ±10% $R_{165, 265}$
	-529-	270Ω RD1SP ±5% R_{303}
	-530-	82Ω 〃 〃 R_{304}
	-537-	2.2Ω RD2SP ±10% $R_{108, 208}$
	1-207-084-	wire wound 8Ω 6W ±10% $R_{171, 271}$
		CAPACITOR
	1-105-667-	mylar, $0.0068\mu F$ 50WV $C_{151, 251}$
	1-107-008-	silvered mica 150pF $C_{312, 313}$
	1-105-689-	mylar $0.22\mu F$ 50WV $C_{128, 228}$
	-679-	〃 $0.033\mu F$ 〃 $C_{108, 208}$
	-677-	〃 $0.022\mu F$ 〃 $C_{102, 202}$
	-673-	〃 $0.01\mu F$ 〃 $C_{123, 223}$
	-671-	〃 $0.0068\mu F$ 〃 $C_{101, 201}$
	-665-	〃 $0.0022\mu F$ 〃 $C_{126, 226}$
	-661-	〃 $0.001\mu F$ 〃 $C_{148, 248}$
	-663-	〃 $0.0015\mu F$ 〃 $C_{114, 214}$
	1-107-016-	silvered mica 470pF $C_{104, 204}$
	-006-	〃 330pF $C_{134, 234}$
	-005-	〃 220pF $C_{120, 220}$
	1-129-380-	polyethylene $0.0056\mu F$ 600WV C_{302}
	1-121-081-	electrolytic $500\mu F$ 15WV C_{305}
	-319-	〃 $200\mu F$ 12WV $C_{103, 203}$
	-317-	〃 $200\mu F$ 3WV $C_{111, 211}$
	-340-	〃 $100\mu F$ 15WV $C_{121, 221, 131, 231}$

Parts List

Ref. No.	Part No.	Description
	1-121-339-	electrolytic 100μF 10WV $C_{119,219}$
	-315-	〃 100μF 6WV $C_{109,209,115,215,132,232}$
	-290-	〃 100μF 3WV $C_{107,207,136,236}$
	-308-	〃 30μF 3WV $C_{105,205}$
	-307-	〃 10μF 12WV $C_{116,216,135,235,110,210,113,213,133,233}$
	-367-	〃 3μF 25WV $C_{130,230}$
	-234-	〃 500μF 25WV $C_{307,308,309}$
	-336-	〃 30μF 15WV $C_{137,237}$
	1-119-149-	〃 500μF 25WV $C_{143,243}$
	-173-	〃 500μF 50WV $C_{147,247}$
	1-121-094-	〃 1000μF 35WV C_{310}
	-286-	〃 30μF 25WV $C_{140,240}$
	3-790-227-12	INSTRUCTION MANUAL
	3-793-009-11	INSPECTION CARD
	3-793-010-20	TAPE TALK
	1-534-099-16	CORD, power supply
	0-041-127-12 (-01)	BAG, polyethylene; red; 50 c/s (white; 60 c/s)
	3-430-229-	CAP, reel
	3-401-193-02	RIBBON, head cleaning
	1-534-036-02 (-01)	CONNECTION CORD; black (RK-46) (red)
	3-403-810-	COVER, polyethylene
	3-701-020-	CHECK SHEET BAG
	3-418-221- (-210-)	PULLEY 60 c/s motor (50 c/s)
	3-701-025-	SPLICING TAPE PS-2
	7-491-001-	DESICCANT
	8-811-960-30	MICROPHONE F-96 (MTL)
	8-860-107-	REEL R-7A
	8-918-210-53	DEMONSTRATION TAPE, DSE-53
	Y-20161-01-	OIL, OL-1K
175	1-509-064-	SOCKET, voltage selector
176	-029-	CONNECTOR, record/playback
	1-536-030-	TERMINAL STRIP 2-L-2
	1-532-007-	FUSE, 1.5A
	1-244-697-	RESISTOR, carbon; fixed, 10KΩ RD¼SR ±5%
	3-430-813-	TOOL SET

Parts List for Noise Suppress Switch (additional)

Part No.	Description	Q'ty
X-34300-66	Mounted Circuit Board (Noise Suppress Switch)	1
1-538-679-	Printed Circuit Board (Noise Suppress Switch)	1
1-514-314-	Slide Switch	1
1-129-128-31	Capacitor, polyethylene 750pF ±10%, 50WV $C_{153,253}$	2
3-430-252-	Bracket, suppress switch holder	1
-253-	Ornamental Plate, suppress switch	1
-178-05	Sub-chassis, control panel	1

Parts List

Parts List for U. S. A. (Additional)

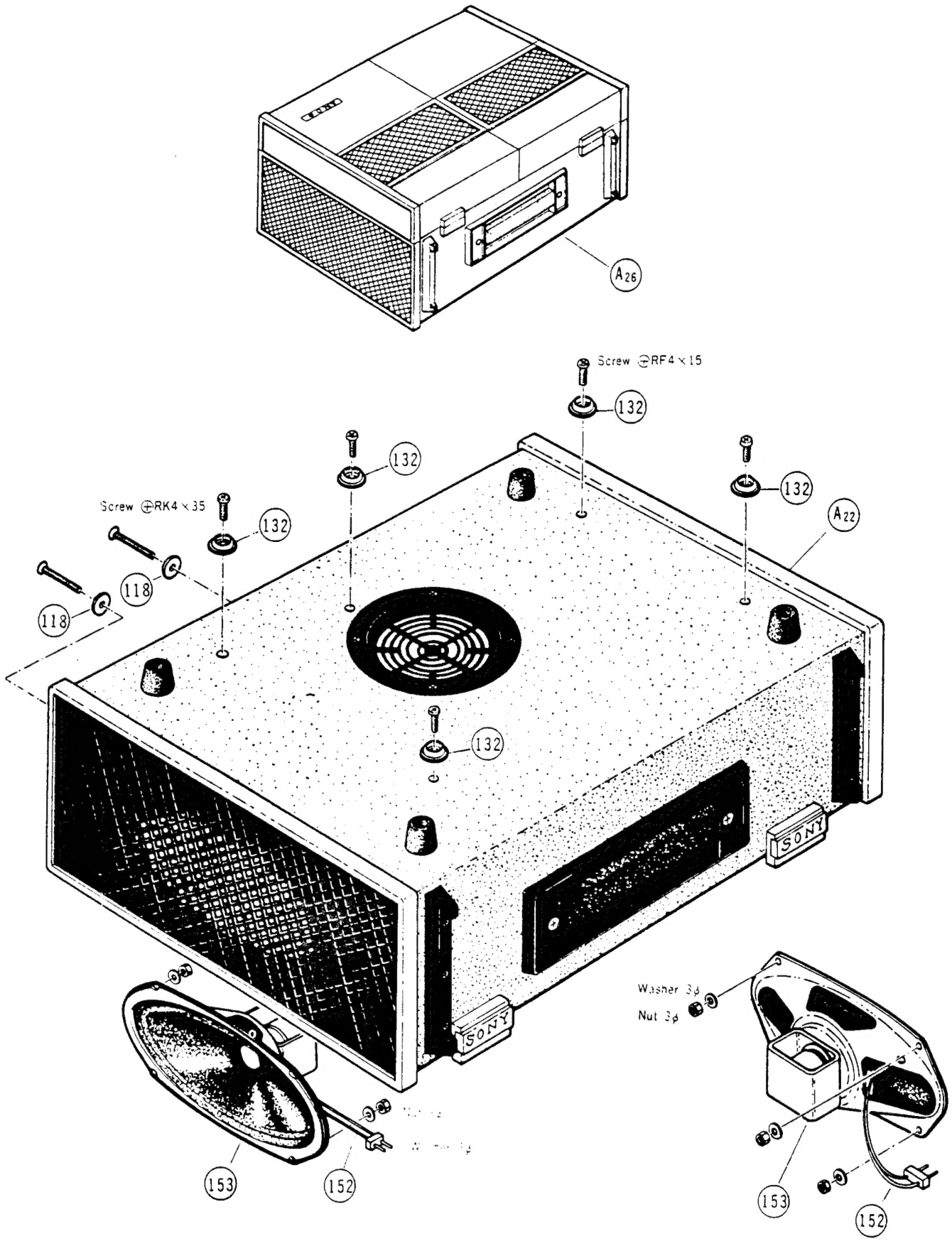
Ref. No.	Part No.	Description
	X-34300-28-2	CARTON ASS'Y
24	3-430-176-	DECORATION PLATE, jack
	-205-	LABEL, serial NO.
125	3-403-808-	BOX, AC SOCKET
	3-410-044-	CAP, MP CAPACITOR
100	3-418-211-	MOTOR PULLEY 60 c/s
	3-427-291-	CAUTION LABEL
	3-429-902-	INSULATOR, fiber
	3-790-227-22	INSTRUCTION MANUAL
	3-793-030-	TAPE BOOKLET
	1-506-105-01	PIN PLUG (red)
	-02-	(black)
	0-037-241-01	EARPHONE CASE
	X-37010-08-1	HEAD CLEANING RIBBON
176	1-441-252-	POWER TRANSFORMER
175	1-117-035-	MP CAPACITOR, 1.5μF AC 300V

Parts List for CSA (Additional)

Ref. No.	Part No.	Description
	X-34300-28-3	CARTON ASS'Y
A22	X-34309-01-	CABINET ASS'Y, body
A26	X-34309-02-	COMPLETE CABINET ASS'Y
24	3-430-176-	DECORATION PLATE, jack
	-901-	LABEL, serial NO.
	3-407-956-	CAUTION LABEL
	3-410-044-	CAP, MP CAPACITOR
125	3-403-808-	BOX, AC SOCKET
	3-429-902-	INSULATION, fiber
	3-490-227-42	INSTRUCTION MANUAL
	1-534-375-12	POWER CORD
	8-922-404-00	TOOL SET
	8-918-211-23	DEMONSTRATION TAPE, DSJ-73
176	1-441-252-	POWER TRANSFORMER
	1-231-057-	ENCAPSULATED COMPONENT 0.033μF +120Ω 500WV
175	1-117-035-	MP CAPACITOR, 1.5μF AC 300V

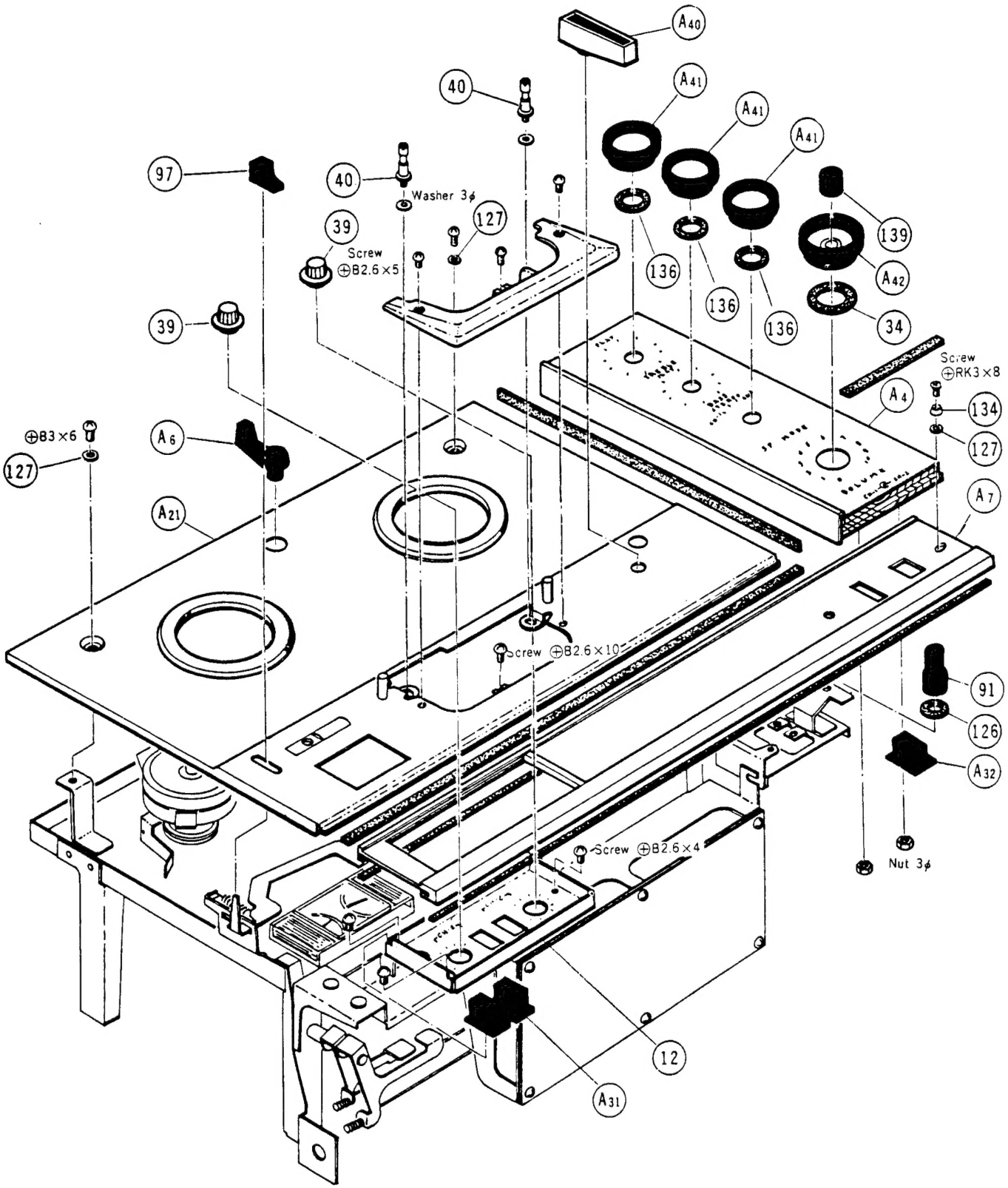
Exploded Diagram

Cabinet—Bottom View



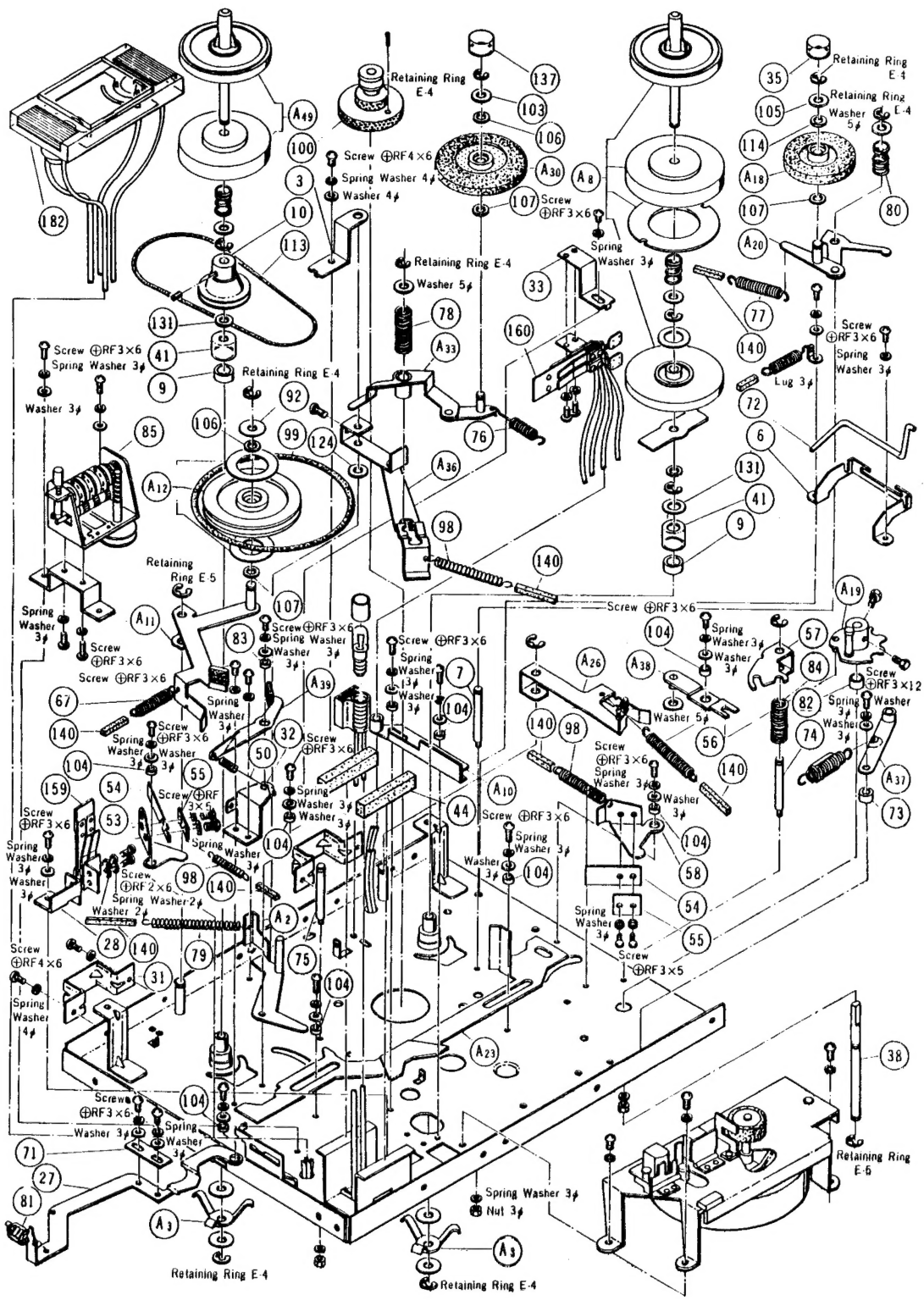
Exploded Diagram

Reel Panel—Top View



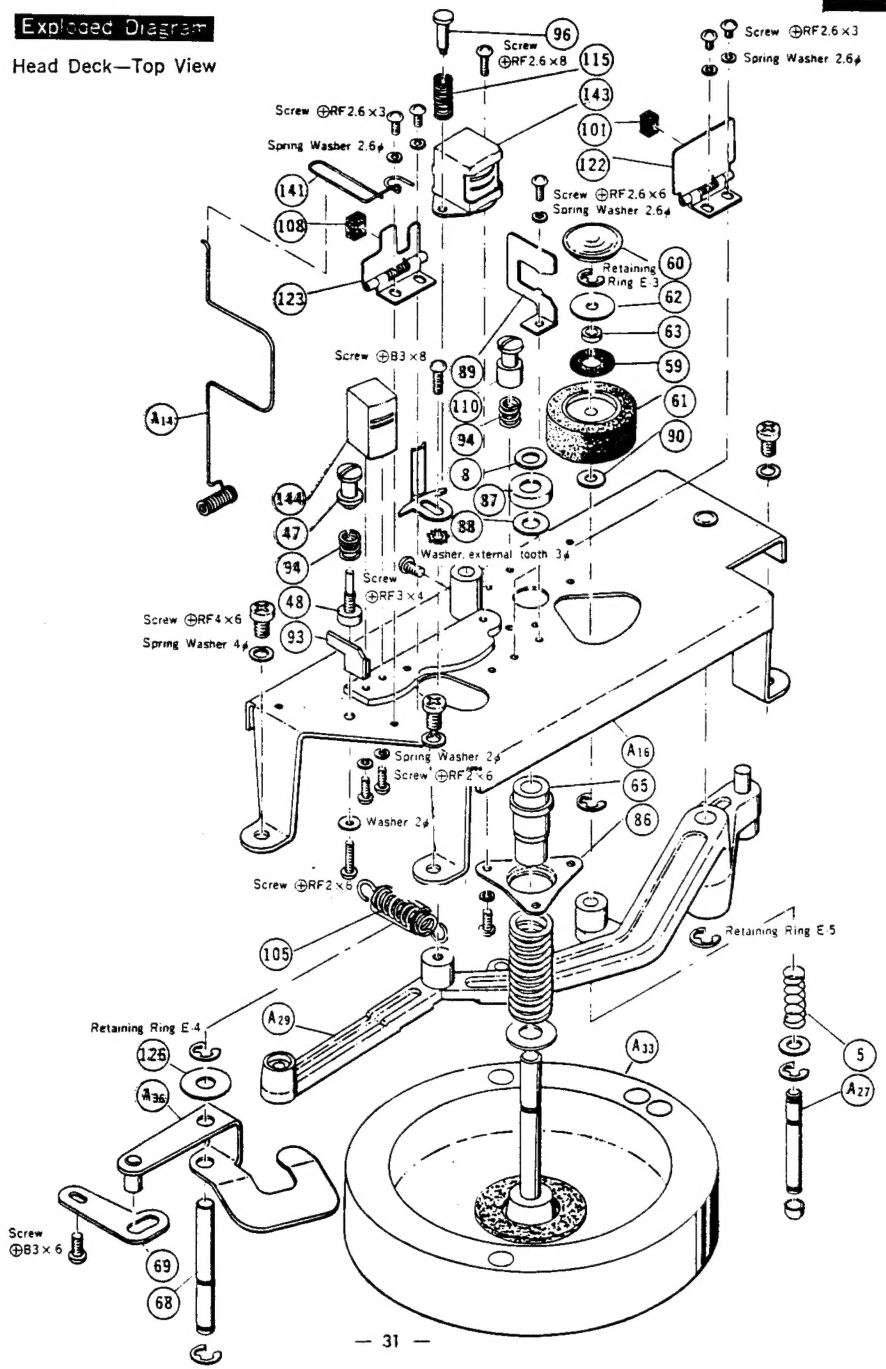
Exploded Diagram

Tape Transport Mechanism—Top View



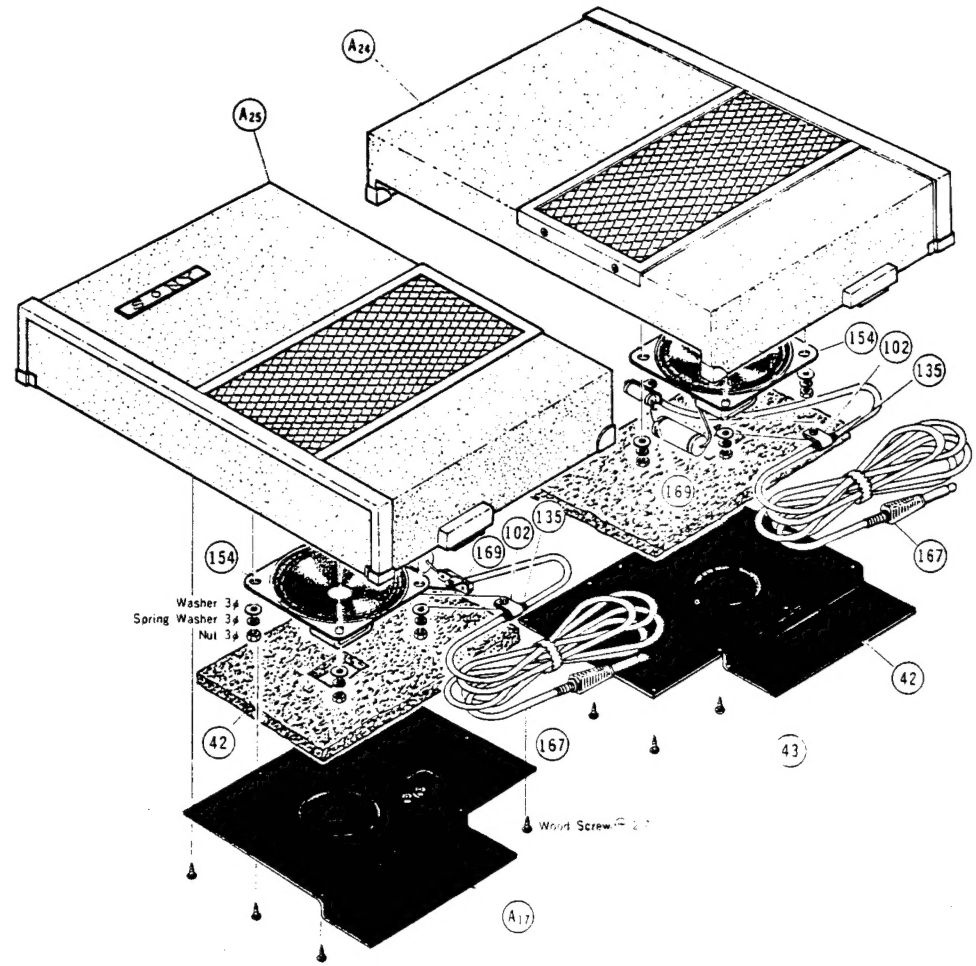
Exploded Diagram

Head Deck—Top View



Exploded Diagram

Lid Speakers—Top View



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